



FINANCIAL TIMES

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South Africa: a time to be brave, Page 12

World news Business summary

SA police clash with blacks at rally

South African riot police used tear gas and whips in clashes with thousands of blacks at an anti-apartheid rally in Durban. Demonstrators demanded the unconditional release of jailed African National Congress (ANC) leader Nelson Mandela and celebrated the dropping of treason charges against 12 leading United Democratic Front (UDF) activists. The rally, attended by about 6,000 people, was the first UDF gathering to be permitted by the authorities since the declaration of the state of emergency on July 21 under which several thousand UDF members have been arrested. Details, Page 3; South Africa economy, Page 12.

Shultz on attack

US Secretary of State George Shultz visited two Warsaw Pact capitals, Bucharest and Budapest, after challenging in West Berlin the Soviet Union's domination of Eastern Europe. Page 14.

Ban to be lifted

Bangladesh President Hossain Mohammad Ershad said a ban on political activity would be lifted from January 1. The main opposition group described the offer as inadequate and vowed to go ahead with their protest plans.

New finance chief

Moscow appointed Boris Gosteyev as its new Finance Minister to replace Vasily Garbuzov who died last month. Gosteyev has worked in the finance and planning department of the central committee secretariat since 1983. Page 2.

India elections

Indians pass judgment on Prime Minister Rajiv Gandhi's first year in office today with seven national parliament by-elections and 12 state assembly by-elections. Page 3.

Iran frees PoWs

Iran released 97 disabled Iraqi prisoners of war on humanitarian grounds and flew them to Turkey for repatriation.

Police stop protest

Polish police backed with water cannon stopped supporters of the banned trade union Solidarity from gathering in Gdansk at a memorial to strikers killed by security forces 15 years ago.

Basque found dead

The handcuffed body of a Basque who disappeared last month while in police custody was found in a river near the northern Spanish city of Pamplona. Page 3.

Banknote error

Several hundred thousand new Yugoslav banknotes have been issued bearing the wrong date of the death of Marshal Josip Broz Tito, founder of the post-war communist state. The notes will be gradually phased out.

Privatised spies

Roman Interior Minister Friedrich Zimmermann confirmed that West Germany's main intelligence agency, the BND, took money from private businesses, while hunting for missing toxic chemicals in 1983.

'No ferry crossings'

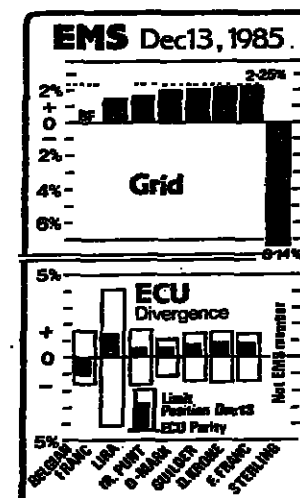
Townsend Thoresen said its cross-Channel ferry services from Dover were expected to remain at a standstill, in spite of a planned return to work today by striking seamen.

World Cup draw

The draw for the first round of next year's World Cup in Mexico was made. Group A is Italy, Bulgaria, Argentina, South Korea; B: Mexico, Belgium, Paraguay, Iraq; C: France, Canada, Soviet Union, Hungary; D: Brazil, Spain, Algeria, Northern Ireland; E: West Germany, Uruguay, Scotland, Denmark; F: Poland, Morocco, Portugal, England.

Israel's monthly inflation up 0.5%

ISRAELI inflation rose by 0.5 per cent in November, lowest monthly rise for almost nine years. EUROPEAN Monetary System: The Italian lira regained its place at the top of the EMS but finished below



its best level of the week. It replaced the French franc which fell quite sharply against the D-Mark towards the end of the week. The D-Mark showed a general improvement, helped by renewed dollar weakness. The Belgian franc remained the weakest currency but stayed well within its divergence limit.

The chart shows the two constraints on European Monetary System exchange rates. The upper grid, based on the weakest currency in the system, defines the cross rates from which no currency (except the lira) may move more than 2% per cent. The lower grid, based on the lira's divergence from its 'central rate' against the European Currency Unit (ECU), defines a basket of European currencies.

TIN: International Tin Council, which owes millions of pounds to bankers and London Metal Exchange brokers, says it will decide on Wednesday whether to negotiate with creditors. Page 14.

EEC has imposed a record Ecu 10m (\$6.7m) fine on Dutch group Akzo Chemie for trying to squeeze small British retail Engineering and Chemical Supplies of Stonehouse, Gloucestershire, out of a market it dominated. Page 3.

BRITISH AIRWAYS, state-owned airline, is expected to show it is financially soundly on course for privatisation with pre-tax profits of about £200m (\$287m) for the first six months of financial year to end-September, compared with £180m a year ago.

UNION CARBIDE, multinational chemical company facing a hostile takeover bid from GAF of the US, is selling its worldwide film-packaging business for \$200m. Page 15.

GEMINIA, financial vehicle owned by Fiat, Pirelli and other leading Italian companies, is to take majority control of the Rizzoli publishing group which includes the Corriere della Sera, Italy's major newspaper.

CHLORIDE will be paid \$8m by the US Electric Power Research Institute for use of research behind Chloride's sodium-sulphur 'super battery'. Page 5.

PRICE WATERHOUSE, third biggest US accountants, reported fee income up 22.7 per cent at \$34.5m (\$135.7) for the year ended September, its biggest annual growth for 20 years.

VOLKSWAGEN do Brasil is investing \$800m in expansion during the next four years.

BRITISH AEROSPACE has won a \$120m contract with Indonesia to supply the Raptor missile system to its army. Page 4.

AIRBUS INDUSTRIE vice president Johann Schaeffler will leave after 11 months in the post to become chief executive of Dornier, West Germany's No. 2 aerospace company, from February.

EEC reformers urge compromise with Euro MPs

COMMITTED reformers of the EEC seeking substantial changes to streamline decision-making and extend the powers of the European Parliament will launch a last effort today to reopen the modest reform package approved by the Community heads of government at their Luxembourg summit two weeks ago, writes Quentin Peel in Brussels.

Their initiative is certain to be resisted by member states such as Denmark and the UK, for whom the Luxembourg agreement represents the outer limits of any move to restrict national sovereignty and reinforce the Community institutions.

If today's meeting of EEC foreign ministers fails to extend the reforms, however, there is a real danger that the measures will be rejected by the European Parliament, and as a result by the Italian Parliament and Government. No reform of the Treaty of Rome is possible without unanimity.

Italy, Belgium and the European Commission itself are keen to go some way further to meet the demands of MEPs by setting a strict time limit on the decision-making process of the Council of Ministers.

The issue goes to the heart of the unwritten rules of national veto - the so-called Luxembourg compromise - whereby member states may individually delay indefinitely reaching any majority decision by citing their 'vital national interest'.

The parliament wants to ensure that if the member states fail to agree within three months on a

Common Market regulation proposed by the Commission, then the version approved by the MEPs would stand.

The foreign ministers also have to decide what will happen according to the reforms, if the parliament rejects outright a 'common position' agreed by the Council of Ministers.

Apart from the threatened clash over parliamentary powers, the ministers must also try to get a range of national objections lifted on key subjects supposed to be decided in future by majority voting instead of unanimity.

Those include measures to enable EEC-wide recognition of professional qualifications, regulations to open up air and sea transport to

free competition, and to liberalise capital movement.

Britain has a strong reservation - inspired by Mrs Margaret Thatcher, the Prime Minister - against a new chapter in the Rome Treaty providing for rules to promote social policies and protect the working environment, to be decided by majority voting. Mrs Thatcher insisted in Luxembourg that only unanimity would protect small businesses from an excessive burden of new regulations.

The irony is that Britain is thereby opposing the 'one reform to which the Danish Government is committed, and which has been included largely to persuade Denmark to go along with the whole package.

Another divisive issue unresolved by the heads of governments is the format for the reforms. France has proposed bringing the institutional reforms of the Rome Treaty and a new treaty on foreign policy cooperation together under the title of a Treaty of European Union.

No one else wants more than a form of words to do so, although the French proposal would provide for a separate secretariat to administer it. For Denmark, even the form of words may still prove too strong.

If the foreign ministers can agree on all the outstanding loopholes, the reforms will be submitted for legal drafting, and then to the national parliaments of the Community for ratification during next year. The ministers will meet today and tomorrow.

UK Defence Minister presses European solution for Westland

BY JOHN HUNT AND BRIDGET BLOOM IN LONDON

MR Michael Heseltine, the UK Defence Secretary, will continue to press in Cabinet this week for a European solution for Westland, Britain's ailing helicopter manufacturer, against strong opposition from Mr Leon Brittan, the Trade and Industry Secretary.

The differences between leading Cabinet members have become a major political embarrassment to the Government and Mr Brittan is expected to make a statement to the House of Commons today in an effort to clarify the issues.

The row erupted over the weekend, following Westland's rejection on Friday night of a rescue bid from four European aerospace companies.

Mrs Margaret Thatcher, the Prime Minister, may have to adjudicate between Mr Heseltine, who would like the rejected bid to be taken direct to shareholders, and Mr Brittan, who believes that the company should be left to conclude its preferred deal with Sikorsky, the subsidiary of the US conglomerate, United Technologies.

Sir John Cockney, Westland's chairman, is understood to have written to Mrs Thatcher asking her to support his choice of Sikorsky.

The dispute between the two ministers has been brewing since Mr Heseltine backed the all-European rescue offer three weeks ago. Clear divisions emerged over the weekend with Mr Heseltine, representing Westland's largest customer, taking a clear interventionist stance and Mr Brittan, head of Westland's sponsoring ministry

adopting a much more laissez faire attitude.

Mr Heseltine maintains that Westland might become a more subcontractor for the Americans under the United Technologies deal. In a radio interview yesterday he said his department had a crucial interest in ensuring that Westland did not become just a 'metal basher' for overseas interests.

He has seen in the Westland dilemma a chance to rationalise Europe's helicopter industry currently facing serious over-capacity, and tough US competition.

Since mid-November, he has sought and got the support of the French, Italian and German governments for a rescue bid involving a consortium of Agusta of Italy, Messerschmitt-Bölkow-Blohm and British Aerospace. A late entrant last Friday was GEC, the UK electrical group. Lord Westminster, managing director, said at the weekend that GEC was ready to put money into the rescue offer, though it has not been formally involved in the consortium's negotiations.

In a statement at the weekend Mr David Horn, managing director of Lloyds Merchant Bank which is acting for the four companies, said it had been agreed to take the consortium offer direct to shareholders, following the Westland refusal.

Mr Brittan still firmly believes that the choice of rescuer should be left to Westland. Mrs Thatcher is believed to share his view, although some ministers and some conservative

backbenchers are backing Mr Heseltine.

Sir John Cockney, Westland's chairman, will on Thursday recommend to a shareholders' meeting that they accept the United Technologies/Fiat offer for 29.9 per cent stake in the company with an option to increase the stake later.

Full details will be announced on Thursday with the publication of preliminary results for the year ending Sept 30 and details of the company's capital reconstruction.

The rival offer from the European companies is also for a 29.9 per cent shareholding which would be equally divided between the four aerospace companies. The critical element, in both offers is a proposal to fill the company's gap in its order books between now and about 1990, when it is expected to start building a new heavyweight naval and utility helicopter, the EH101, with Agusta of Italy.

Sir John Cockney repeated yesterday that the Sikorsky offer, which is believed to centre principally but not exclusively on the manufacture under licence of Sikorsky's medium weight Black Hawk helicopter, was in both the short and longer term interests of the company.

United Technologies and Fiat between them had guaranteed work over the next three years 'irrespective of the market place or market conditions'.

Continued on Page 14

Editorial Comment, Page 12; Defence industry survey, Pages 21-25

French group to take stake in Channel link

BY DAVID MARSH IN PARIS AND ANDREW TAYLOR IN LONDON

FRANCE's state-controlled Caisse des Dépôts et Consignations financial group will take a 'significant' stake in the fixed link across the Channel, whichever of the four competing schemes is chosen, Mr Robert Lion, the group's chief executive said.

Mr Lion's statement represents the first unconditional offer from the French of a capital participation in the Channel link. The Caisse, which has a balance sheet of more than FFr 1,100bn (\$143bn) and collects deposits from state savings banks, is the largest financial concern in France.

Four fixed-link schemes have been submitted to the two governments, which are expected to announce next month which, if any, of the proposals should go ahead.

A joint Anglo-French report assessing the four schemes, which involve various combinations of bridges and tunnels, is to be submitted to ministers this week.

The Caisse has been preparing its position on the fixed link, as have other big French investors such as the nationalised insurance groups. Mr Lion said, however, that the Caisse had made its decision to take a stake on its own and not in co-ordination with other groups.

He said the Caisse had no declared preference for any of the rival promoters bidding to build the link but would be backing the victor. It was looking for participation purely as a financial investment.

The Caisse said it planned to take its stake in the form of shares and convertible bonds but Mr Jacques Delmas-Marsalet, deputy director

general in charge of financial investments, said the group would prefer to have a large proportion as possible in convertible bonds.

Caisse said the investment would follow logically from its role in helping to finance France's motorway network.

Meanwhile, Britain and France are understood to have provisional agreement that sales of duty-free goods should be allowed on the fixed link.

The two governments are understood to be preparing a proposal to take to Brussels next year in an attempt to persuade their EEC partners that duty-free sales, which are not permitted at European land frontiers, should be allowed on the fixed link.

Some EEC members are already critical of duty-free sales on cross-Channel ferries, which they regard as unfair competition when the Community is trying to establish common tariffs between member countries.

Cross-Channel ferry operators have also appealed to the two governments not to allow duty-free sales on a fixed link that is likely to take a large slice of their business.

The report, to be presented to the two governments this week, is unlikely to give a clear recommendation for any one of the four schemes.

Instead it will provide detailed appraisal of each discussing its merits and disadvantages, and how

Continued on Page 14

Survey, Section III

Paris reaches agreement with China to provide nuclear plants

BY PAUL BETTS IN PARIS

FRANCE has reached an agreement in principle with China to supply the nuclear reactors and supervise the construction of China's first nuclear power station to be built at Guangdong in Canton at an overall cost of about \$4bn.

Mrs Edith Cresson, the French Trade and Industry Minister, said that the agreement was a major breakthrough in the seven-year negotiations between France and China. "We reached an accord on price and a mission is leaving for Peking on Wednesday to finalise the financial agreement," she said at the weekend.

France, the French nuclear power reactor company, will supply the two 900 Mw reactors while Electricité de France (EdF), the French state electricity utility, will supervise the construction of the power station. GEC, the British electricals group, is involved in parallel negotiations with China to supply the non-nuclear equipment, including turbines, for the plant.

GEC, which is bidding to supply two 950 Mw turbine generators and associated switchgear to the plant, said at the weekend that it was still negotiating with China over terms. The company broke off talks with China in late October, returning a

fortnight later after China threatened to seek competitive tenders.

French industry officials said France's share of the total contract was expected to amount to about FFr 10bn (\$13bn) of which at least 60 per cent should go to Framatome.

Mr Jean-Claude Leny, the chairman of Framatome, said that the agreement in principle reached in Paris on Friday with Li Peng, China's Deputy Prime Minister, was a "major step forward." A formal letter of intent is now due to be signed before March 1 next year. But Mr Leny said "substantial parts of this letter of intent are ready."

France has conceded favourable financial terms to China to secure the large order. China is expected to pay less for its nuclear plant than EdF pays for the same equipment in France.

Mrs Cresson acknowledged that France had been forced to offer "attractive financial conditions" but added that China was the only country in the world to have a major new nuclear programme and that France was now well placed for future orders.

France is understood to have offered credits carrying 9.85 per cent

interest rates with repayments starting only after 6 to 7 years and stretched over 12 to 15 years. Industry sources claimed that only a few outstanding issues like banking commissions still had to be settled but were not expected to upset the final negotiations.

The French Government and Framatome have worked hard to secure the Chinese deal because of its implications for France's nuclear industry. The first Chinese order and potential other future orders for China's long-term nuclear programme will provide Framatome with much needed new business at a time of general stagnation of nuclear orders from abroad and from EdF.

The argument over the pricing of GEC's part of the contract appears to be continuing. The original GEC bid was submitted to China in March 1984. Like the Framatome bid, GEC's proposals contained a financing element, put together by the group's advisers Schroder Wagg. GEC is seen as having a weaker negotiating position than Framatome, since the more conventional equipment which it is bidding to supply is provided by several other manufacturers.



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OVERSEAS NEWS

CARTAGENA GROUP SUMMIT TO CALL FOR EXTRA MEASURES Baker plan gets cool response

BY JIMMY BURNS IN MONTIVIEGO

LATIN AMERICAN officials have reacted unenthusiastically to the public declaration of support by British, Japanese and US banks for the developing country debt initiative launched in October by Mr James Baker, the US Treasury Secretary. "If the banks think that we are all now just going to fall into line behind Baker, they've got another think coming," said one senior official. Eleven Latin American countries have agreed to press for a package of additional measures aimed at easing the region's \$350bn (£250bn) debt problem. The measures will form the basis of discussion during a two-day summit, starting today, of foreign and economic ministers of the debtor countries known as the Cartagena Group. In Washington yesterday the World Bank and the IMF issued a joint statement welcoming the banks' public declaration of

support for the Baker Plan.

The announcement made jointly by Mr A. W. Clausen, president of the World Bank and Mr Jacques de Larosiere, Managing Director of the International Monetary Fund said banks accounting for an overwhelming majority of claims on heavily indebted middle income countries had welcomed the initiative as "positive and constructive" and confirmed their willingness to play their part.

The announcement is clearly timed to try and encourage the Cartagena group to respond positively to the Baker Plan. This will not however prevent the group from pressing for a package of additional measures. The group believes the Baker initiative is a political step in the right direction but must be taken further if it is to be made to work. Among the measures expected to be pressed on the ministerial

meeting are:

- Capitalisation of debt interest payments.
- Greatly improved terms and conditions on new commercial loans. The \$20bn contemplated in the Baker plan is considered useful but not enough.
- An increase in the availability of compensatory financing from the International Monetary Fund to make up for the fall in commodity prices and high US interest rates which should be brought down anyway.

- A more flexible linkage between multilateral loans available under the plan and the structural changes expected to be undertaken by the beneficiaries.
- Extended export credits to be maintained after reschedulings.
- An extension of the benefits envisaged under the Baker Plan to other third world

countries, particularly those in Central America who are currently excluded.

Some industrialised nations and bankers who had been expecting more support for the Baker Plan by the mid-month deadline set by the US Treasury, may be disappointed by the response but officials here were anxious to emphasise that the measures were not aimed at confrontation.

The Latin Americans say they want to complement what they consider a vaguely defined plan, and are understood to have rejected fully more radical measures such as a regional unilateral decision limiting interest payments to a small percentage of exports. Brazil, Mexico and Argentina, the region's three major debtors, have agreed moreover, that the Baker Plan deserves a serious response from the ministerial meeting.

Trade shortfall clouds Polish debt talks

BY CHRISTOPHER BOBINSKI IN WARSAW

POLAND'S hard currency trade surplus for the first 11 months of the year was worth \$931m (£687m) the Polish Government said at the weekend. The announcement came as an official team prepared to leave for Paris for important debt talks with Western government creditors.

With the surplus lower than originally planned, the meeting will take place against a background of speculation that Poland will not be able to fulfil its financial obligations to Western governments this year.

Last July Poland signed a debt rescheduling agreement on payments worth \$12bn falling due between 1982 and 1984 and another agreement last month on payments worth \$1.4bn falling due this year.

But the dearth of fresh Western government credit following these agreements makes it impossible, the poles are likely to argue, to cover initial payments.

Western diplomats in Warsaw estimate that Poland has payments worth \$1.4bn falling

due both to Western banks and governments between November and January.

Payments to the banks, however, are thought to be flowing more or less smoothly while the Poles have always said to governments that should the \$800m worth of fresh credits they have asked for not become available they will have to come back for a further rescheduling.

Only Austria so far has provided some \$40m worth of credit while West Germany is offering DM 100m (£27.6m).

However, the unplanned fall in hard currency exports this year weakens the Polish case for greater latitude on payments as Warsaw has always said the key to increased exports is a growth in imports supported by credits.

But after 11 months, imports from the West have risen by 10.5 per cent of constant prices while export earnings are down by 3.5 per cent. The fall in exports is also out of line with industrial production which is growing at an annual rate of 3.3 per cent.

Moscow names Finance Minister

BY PATRICK COCKBURN IN MOSCOW

THE SOVIET UNION has appointed Mr Boris Gostyev as its new Finance Minister to replace Mr Vasily Garbuzov, who died last month after holding the job for 25 years.

Mr Gostyev previously worked as deputy to Mr Nikolai Ryzhkov, the new Soviet Prime Minister, when he was head of the economic department of the Communist Party central committee. His appointment as Finance Minister means that there has been a complete turnover in the top four administrative posts in the Soviet economy in the last three months.

Mr Gostyev, a 59-year-old professional economist, has worked in the finance and planning department of the central committee secretariat since 1963. Diplomats note that pressure for Soviet economic reform now comes primarily from the Communist Party while reformers in the 1980s were usually state officials.

Within the last three months Mr Mikhail Gorbachev, the Soviet leader, has appointed new men to four key posts running the economy. They are the Prime Minister, Head of State Planning, Minister of Foreign Trade and the Minister of

Finance. A third of government ministers have been changed by Mr Gorbachev.

These new appointments mean Mr Gorbachev's plans for economic reform are much more evident in last month's budget and plan for 1986 than they are in the five-year plan drawn up earlier this year. Capital investment is to increase by the very high figure of 7.8 per cent next year compared to between 3.4 and 3.9 per cent annual growth in investment in the five-year plan. Very high priority is given to machine tools, machine building and high technology.

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AIR CANADA



OVERSEAS NEWS

UDF members clash with police at Durban rally

BY ANTHONY ROBINSON IN JOHANNESBURG

A RALLY in Durban to celebrate the dropping of treason charges against 12 leading United Democratic Front (UDF) activists and to demand the unconditional release of jailed African National Congress (ANC) leader Nelson Mandela turned into a violent confrontation with police yesterday after demonstrators leaving the Curries Fountain stadium stoned police vehicles.

A crowd of singing and chanting black youths streamed out of the stadium after emotional speeches from the released UDF leaders and threw rocks at two police Land Rovers and vehicles driven by whites. Shops were stoned and looted, eyes witnesses said.

Police, supported by army units, then returned in force to beat back the demonstrators with tear gas. Many of the demonstrators were forced back into the stadium but were allowed out of another exit which leads to a mainly Indian and black area.

The rally, attended by an estimated 6,000, was the first gathering permitted by the authorities since declaration of the state of emergency on July 21 under which several thousand UDF activists have been arrested. It passed off without incident except when sections of the crowd moved to

hold banners demanding the release of Mr Mandela before the cameras of a police video-camera team seeking to film the rally from outside the stadium.

The keynote speech at the rally was to have been delivered by Mrs Winnie Mandela, wife of the jailed ANC leader. But she did not appear and the main speech calling for the release of Mr Mandela and further defiance by the UDF was made by Mrs Albertina Sisulu, the 67 year old wife of jailed ANC activist Walter Sisulu. Mrs Sisulu is one of the 12 UDF leaders released last week.

On Saturday, eight foreign newsmen were detained by the police while reporting on the funeral of two black unrest victims in Mamelodi, near Pretoria.

Anti-police feeling is still strong in the township after the shooting and the release of the police on November 21 which has led to a boycott of white shops in Pretoria. Mr Graham Leach, the BBC radio correspondent, was among the arrested and then released after pointing out that Mamelodi was not in an area covered by the emergency regulations. The incident has led to a formal complaint by the Foreign Correspondents' Association.

Reagan faces uphill battle to save tax reform initiative

BY STEWART FLEMING IN WASHINGTON

PRESIDENT Ronald Reagan is planning a rare trip to Capitol Hill this afternoon to try to rally Republican support for the tax reform initiative which has been the top domestic legislative priority of his second term.

But he faces an uphill task if he is to avoid a humiliating defeat in spite of the all-out lobbying effort the White House has been mounting to try and persuade his nominal allies in the House of Representatives to back tax reform.

Last week only 14 Republicans voted in favour of a tax reform plan designed by the

Democratic majority on the House Ways and Means Committee. The President wants the plan passed to allow it to go to the Senate where the White House hopes the legislation can be amended to make it more acceptable to Republicans.

Mr Reagan also faces another thorny issue this week when he seems certain to be forced to decide whether or not to approve farm legislation which will cost the US billions of dollars more than it has been budgeting for. The prospect of such a large extra bill comes at a time when the White House is announcing that the Pres-

ident will propose billions of dollars of budget cuts, including medical supports for the elderly, in his 1987 budget plan.

On Saturday a conference committee of the House and the Senate reached agreement on a new farm Bill which calls for major reforms in agricultural policy but which is estimated to cost some \$2bn more than the Administration wants in its first three years.

Among the Bill's provisions is a proposal that the Administration should toughen sugar import quotas in order to reduce the cost of the domestic sugar subsidy. It also proposes

increased support for export promotion as part of a drive to try to recover lost overseas markets.

Mr Reagan has been threatening to veto budget busting appropriations, but he is under heavy pressure to back the farm legislation which should clear Congress early this week.

House and Senate negotiators have reached a compromise on the fiscal year 1986 defence budget. It would provide for the first time since 1969, federal financing for chemical weapons, but bans further anti-satellite weapons tests at a cost of \$1.2bn which President

Reagan had requested for research for the Strategic Defence Initiative, the so-called Star Wars space weapons programme.

The agreement means Congress is now close to completing its "catch all" spending, or "reconciliation" Bill which approves funding levels for federal government programmes which have not been specifically authorised in other appropriations bills. Congress has until tonight, when a temporary funding Bill expires, to complete work on a Bill for the President to sign.

Editorial Comment, Page 18

Triumph for hardline greens

By Rupert Cornwell in Bonn

THE HARDLINE fundamentalist wing of the radical West German Greens scored a major triumph at the party's congress at Offenbach near Strasbourg, yesterday, at the expense of the "realist" faction, keen on powersharing with the opposition Social Democrats (SPD).

Their victory was sealed with the rejection by a conclusive 468 to 214 margin of motions calling for the dismissal of the three leaders of the Greens' national executive, who had been bitterly critical of the party's decision to form a coalition with the SPD to govern the state of Hesse.

A truculent Mrs Jutta Dittfurth, one of the three, declared that she continued to regard West Germany as a police state, and promised her enduring opposition to the deal in Hesse.

But Mr Otto Schily, a prominent Green MP and a leader of the party's defeated moderate wing, angrily attacked Mrs Dittfurth afterwards. "Anyone who calls the Federal Republic a police state doesn't know what a police state is."

Mr Schily, celebrated for his effectiveness as a member of the Parliamentary committee which probed the Flick political pay-off scandal, described the outcome of the vote as "a defeat for the pragmatic, realist wing of the party."

Body of missing Basque detainee found in river

BY TOM BURNS IN MADRID

THE BODY of a Basque terrorist suspect who allegedly escaped the Civil Guard after his detention nearly three weeks ago was discovered floating in a river yesterday by the Civil Guard security forces.

The discovery looked likely to increase further protests in Spain over his detention, disappearance and, now, his death.

The case of Mr Mikel Zabalza, a San Sebastian bus driver, has highlighted the issue of the alleged severe mistreatment of detainees held in Civil Guard barracks in the Basque country and prompted some of the most severe rioting seen this year in the Basque country.

The body was found less than half a mile upstream from where the Civil Guard said Mr Zabalza had escaped. The river had been searched during three days last week by frogmen acting under the orders of a San Sebastian judge charged with investigating Mr Zabalza's disappearance.

The Civil Guard has argued that he escaped some hours after his arrest when he was taken, before daybreak, to a remote valley in the Pyrenees to locate an arms cache. Although handcuffed he managed to break free from his guards and evade them, according to the official version.

This version has been contested by Mr Zabalza's girlfriend and by his cousin who were arrested with him and were subsequently released without charges. Both said they had been mistreated and they alleged that Mr Zabalza was tortured and that the Civil Guard had mounted a cover up to explain away his death under interrogation.

Spain's anti-terrorist legislation allows terrorist suspects to be held by the security forces for a 10-day period before appearing before a judge and without access to either lawyers or to independent medical attention.

Mr Zabalza's girlfriend, Idola Ayerbe, told reporters in San Sebastian last night that she was stripped and beaten by police, Reuter reports from Pamplona.

"I first saw Mikel at the Intermundo barracks with his hands tied back and a plastic bag over his head," she said.

Mr Ignacio Ibarra, another of those detained, said he was beaten on the head and testicles by police who put a plastic bag over his head.

Several people were injured yesterday in the northern coastal city of San Sebastian in clashes with police to protest against the disappearance of Mr Zabalza, officials said.

Mr Felipe Gonzalez, the Prime Minister, may have to drop plans to visit Cuba as a result of a diplomatic row after the expulsion of four Cuban officials, the Madrid daily newspaper El Pais said yesterday, Reuter reports from Madrid.

Quoting high-ranking Spanish officials, El Pais said that Mr Gonzalez had planned to make his first official visit to Cuba by next March.

Spain expelled on Saturday Mr Angel Leon Cervantes, the Cuban vice-consul in Madrid and three other Cuban Embassy staff accused of trying to kidnap a Cuban defector at gunpoint.

Commission fines Dutch company

By Ivo Dawans in Brussels

THE EEC Commission has imposed an unprecedented fine of 16m (26.1m) on Akzo Chemie, the chemical division of the Dutch multi-national Akzo, for attempting to squeeze a small British rival out of a key market.

The penalty—the largest ever set under the Community's competition rules—will almost certainly be challenged by the company in the European Court.

However, the Commission warned at the weekend that it intends to penalise those that abuse a dominant market position with fines fixed "at a dissuasive level".

The Akzo Chemie case centred on the efforts of a British company, Engineering and Chemical Supplies (ECS) of Stonehouse, Gloucestershire to enter a market dominated by the Dutch company.

ECS, a producer of peroxide of benzoyl, an agent used to whiten flour, decided in 1979 to sell the chemical as a catalyst for the production of thermoplastics. According to the Commission, Akzo Chemie, which holds more than 50 per cent of this European market, responded by threatening to undermine ECS by selling at a loss to the flour trade.

A Commission investigation at Akzo's Dutch parent British offices uncovered a document confirming that senior officials of the company had issued ECS with an ultimatum to leave the plastics market within a week or face retaliation.

Assam poll test for Gandhi

By John Elliott in New Delhi

INDIA HOLDS a mini-general election today when 10m people in the troubled north-eastern state of Assam go to the polls for state assembly and parliamentary seats, and by-elections are held in seven other parliamentary constituencies across the country.

The polls in Assam follow an accord reached four months ago on the state's refugee problems, while on a wider front the Congress will test the popularity and political success of Mr Rajiv Gandhi, Prime Minister, one year after he won a landslide general election victory.

The polls coincide with a sudden groundswell of opposition against Mr Gandhi's administration from leading industrialists who are incensed and worried by the arrest last week on foreign exchange and customs violation charges of Mr S. I. Kirloskar, an 82-year-old pioneer of Indian industry, after 50 of the Kirloskar engineering group's premises had been raided by Finance Ministry law enforcement officers.

Ministry of Finance officials say privately the arrest is designed to be high-profile warning to other businessmen to end corrupt practices.

When Assam last went to the polls nearly three years ago in early 1983, 3,000 people were killed in uncontrolled mob violence. Today there is no threat of such mass unrest although there will be tight security—and the election will be a stern test of the success of the accord.

Space agencies split over laboratory project

BY PETER MARSH

THE ARCADE issue of the wandering space laboratory is likely to cause ructions at a high-level meeting that begins today in Washington to discuss international collaboration in the heavens.

The US National Aeronautics and Space Administration has called the four-day gathering, which officials from Japan, Canada and the 11-nation European Space Agency will attend, to thrash out plans for a \$12bn international manned space station proposed for 1993.

According to NASA's strategy, the different international groups will each contribute to building the orbiting outpost, which is due to house a crew of eight people who will work mainly on scientific experiments such as low-gravity materials processing.

High on the agenda for the meeting is a proposal for Europe that is part of the orbiting base—a \$2bn laboratory for scientific experiments called Columbus—will periodically leave the main core of the station for separate excursions into the cosmos.

This has annoyed NASA, which says the scheme would upset the overall planning for the station and cause unnecessary problems in the extra docking arrangements that would be required.

"Our vision for Columbus is that it would be permanently attached to the space station," said Mr Bob Freitag, deputy associate administrator in NASA's space station office.

"The different parts of

station will fit together like those for an airplane—they will be like the wings, the fuselage and the tail. You can't have an airplane where you take off the wings and lose them to someone else when you feel like it."

For its part, the Paris-based ESA accuses NASA of being too conservative. "The scheme has technical advantages. It is another way to conceive the overall programme," said an official at the European agency.

The agency says a detachable laboratory could be useful in that, by freeing itself from the bustle aboard the core of the base, it could house experiments in disciplines such as astronomy where quiet conditions are vital.

Behind the European plan is a long-term strategy, conceived initially by France and West Germany. Western Europe's two biggest space powers, that Columbus should be a stepping stone to an independent space station.

The purpose of this week's meeting, which is to last until Thursday, is to discuss comprehensively for the first time the different ideas that the participating countries have for the station.

According to NASA's plans, the overall shape of the station is to be fixed by next April. After this, the different countries have to decide formally on the amount of cash they want to pay for the venture, ready for detailed design work to start in 1987.

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WORLD TRADE NEWS

France considers US technology for fighter engine

BY DAVID MARSH IN PARIS

FRANCE IS considering the possibility of drawing on US technology to help construct the engine for its advanced combat aircraft due to compete with both European and US fighters in the 1990s.

French Defence Ministry officials said at the weekend the question of joint development of the engine between Snecma, the French state-owned aero-engine company, and General Electric, of the US, was a "subject for reflection".

Mr Caspar Weinberger, US Defence Secretary, offered US industrial co-operation over the French fighter in a letter last week to Mr Paul Quilès, the French Defence Minister. French officials from both government and industry stressed at a ceremony on Saturday to unveil the Dassault-Breguet company's Rafale fighter prototype—on which the future French aircraft will be based—that the US offer was being considered seriously.

The US has held out a similar collaboration proposal over a rival aircraft being constructed for the 1990s by Britain, West Germany, Italy and Spain. The two European aircraft will be competing as a result of failure of the five governments concerned to agree on a joint project this summer.

Co-operation between the US and France over a fighter project would mark a switch in France's traditional desire for maximum technological independence from the US in military affairs. Any final decision to go ahead with co-operation would require top-level political approval.

Indonesia orders Rapier in \$120m deal

By Kieran Cooke in Jakarta

FOR THE second time in a little over 12 months, Britain has won a multi-million dollar contract for the supply of missile systems to Indonesia. In Jakarta on Saturday officials of the British Ministry of Defence and British Aerospace (BAe) concluded a deal with the Indonesian Army worth \$120m (\$82.7m) for the sale of units of the Rapier missile system. A similar contract was signed with Indonesia a year ago for the Rapier.

Indonesia is fast becoming a major market for British weapons sales. BAe has sold 20 Hawk trainers to the Indonesian Air Force and is also hopeful of substantial orders for its new single-seater Hawk fighter.

Discussions are said to be well advanced on the sale of up to 600 of the British-built Scorpion light tanks to the Indonesian Army. It is understood that a small number of Scorpions will be delivered to Indonesia in battle-ready condition. The remainder are likely to be manufactured under a collaborative programme with Nurtanio, the Indonesian state aerospace and arms industry.

Iraq to pay debt with oil

IRAQ is to settle part of its commercial debt with Italy by supplying it with crude oil, writes James Buxton in Rome. The deal was reached in Baghdad last week by Mr Nicola Capria, the Italian Trade Minister.

Iraq owes Italy about £3,700m (£1.5bn) in commercial debt. Of that some £700m is in short term debt. The Baghdad government has agreed to supply Italy with \$300m (about £500m) worth of crude oil in settlement of the bulk of its short term debt.

Unlike many other deals of this kind, Iraq will price the crude oil at the spot market price prevailing at the time of the transaction, instead of at the Organisation of Petroleum Exporting Countries (Opec) official price.

Japan keeps VCR export curbs

BY JUREK MARTIN IN TOKYO

JAPAN IS to continue to apply voluntary export restraints on the shipments of six commercially sensitive products, including video cassette recorders, to the European Community.

The Japanese decision, announced over the weekend by the Ministry of International Trade and Industry (MITI), comes on the eve of the EEC Council meeting in Brussels at which an increase in the import tariff on Japanese VCRs from 8 to 14 per cent is expected to be approved.

MITI said that it would continue to monitor the exports of VCRs, colour television sets and tubes, cars, light commercial vehicles, forklift trucks and numerically controlled machining centres next year. If and when the volume of export prices of any of the items went up appreciably, Japan would confer with the EEC over possible remedies.

In the case of VCRs, which MITI said was the prime EEC concern, the monitoring process will bear in mind "that 1.5m to 1.7m sets is the appropriate shipment volume for next year." This year's direct exports are expected to be about 1.8m units, well within the 2.25m set ceiling in the current voluntary restraints programme.

The volume of VCR exports to the EEC has been declining as more and more Japanese companies have established European manufacturing operations and as the European industry has begun to recover.

EEC officials have emphasised that the Japanese announcement was "unilateral" and had not been "negotiated" with the EEC. They doubted whether it would have any impact on the Council meeting in Brussels this week, and suggested that the proposal to raise the duty on VCRs was probably "irrevocable."

The Japanese commitment to extend export restraint is part of a deliberate policy to head off protectionist retaliation. Some indication of the importance of this was provided over the weekend with the reports out of Washington sharply critical of Japan's apparent threat to discontinue curbs on car exports to the US when the current programme expires next spring.

A MITI official had been quoted as saying there would have to be an extraordinary reason for further curbs, given the pressure on Japanese exporters brought about by a higher yen. This year Japan is limiting its car exports to the US to 1.2m units, up from 1.05m in 1984-85. However, on the basis of the latest US sales figures, it could sell far more.

Japan's raising of the ceiling earlier this year had come under attack in Washington. Similar comments waited across the Pacific over the weekend. Senator Dan Riegle from the car producing state of Michigan accused Japan of "a form of trade piracy," and of arrogance, selfishness and irresponsibility.

Eutelsat asks US to bid for launch order

By Our Paris Staff

EUTELSAT, the European satellite telecommunications organisation, is asking the US and European rocket launchers to compete against each other for placing into orbit two communications satellites in 1988.

Competitions for European satellite launching orders between Ariane, the French-led space rocket, and the US space shuttle is highly unusual. Eutelsat, which groups the posts and telecommunications authorities from 26 European countries, has chosen Ariane for the launch of its first five satellites as an integral part of an agreement with the European Space Agency.

Eutelsat officials say prices and other conditions for the 1988 launch offered by the US National Aeronautics and Space Administration (Nasa), and ArianeSpace, the commercial company selling Ariane launchers, are fairly close. "We are trying to get the best deal," said one official. If Nasa offered a more cost effective solution, Eutelsat would be ready to go outside Europe for satellite launching.

Eutelsat is asking only European manufacturers to build the satellites. Costing about \$60m (\$41m) each, the satellites are planned to carry a large number of TV channels for distribution to cable operators.

Two consortia—British Aerospace linked with Matra and Messerschmitt-Bölkow / Marconi—have replied to tenders on building the space craft. A decision on the manufacturer is due early next year.

Three or four satellites are to be built and of these one will be a spare. One satellite will be used by British Telecom for leasing for television.

Eutelsat wants to make a decision on the launch vehicle by next summer.

In another example of competition between Nasa and ArianeSpace for a European client, France is trying to persuade the British to choose Ariane for launching the UK Ministry of Defence SkyNet 4c military communications satellite in 1988.

British officials say converting the satellite to be carried by Ariane rather than the space shuttle could cost about \$10m.

SHIPPING REPORT

Tanker rates fall after Opec market share decision

BY ANDREW FISHER, SHIPPING CORRESPONDENT

THE TANKER market suffered a check last week after the Organisation of Petroleum Exporting Countries (Opec) stated its determination to keep up its market share at whatever price. Freight rates fell and inquiry slackened considerably.

Uncertainty over oil prices caused charterers to hesitate over fixing new vessels, a development likely to exacerbate the usual seasonal problems over the holiday period when owners are eager to find employment for vessels to carry them through Christmas and the New Year.

Even so, underlying rate levels are still well above those prevailing a few months ago, causing Gibraltair's, the UK ship broker, to speak of "expectations of fairly active market conditions for the first few months of next year."

Business in the Gulf was slower than in recent weeks,

with rates subdued. One VLCC (very large crude carrier) was fixed to the west at the reduced rate of \$10.50 per ton. Early in the week, a VLCC was fixed to Japan at \$10.50 per ton.

E. A. Gibson Shipbrokers said that nearly 20 big tankers would be available in the Gulf until the end of the year. With inquiry decreased, it reckoned owners would probably have to accept lower rate levels.

Both the Mediterranean and Caribbean loading areas showed weaker rates. West Africa, however, showed more activity, especially for ships in the 65,000 to 80,000 ton range.

The dry cargo market remained slack during the week, with rates again tending to ease. The rate for grain from the US Gulf to Europe eased by 25 cents to around \$3.25 (\$5.70) a ton, though to Japan it was slightly up at \$13.

Caricom trade success

A \$58.8m fall in British exports to the members of the Caribbean Economic Community (Caricom) in the first nine months of this year has left the group with a \$66.8m surplus in trade with the UK, writes Canute James in Kingston. In the corresponding period of last year it recorded a \$10.5m deficit.

British Government figures, issued by the High Commission in Barbados, show that British exports to the community countries, except Belize, fell to \$289.5m between January and September of this year.

Third World countries toughen stance on Gatt

BY JOHN ELLIOTT IN NEW DELHI

DEVELOPING countries have toughened their stand against services being included in the General Agreement on Tariffs and Trade (Gatt) and have warned that the new round of negotiations called for by the US is "not a just compromise."

This aggressive stance was adopted on Friday in New Delhi by a conference of 37 developing countries including leading opponents of the inclusion of services such as Brazil and Egypt, and other countries such as Singapore, Pakistan and Sri Lanka.

Only South Korea said during the two-day conference that services might be included but it stressed that it did not regard this as a priority item.

The conference was originally organised to mark the opening of new premises for the Indian Institute of Foreign Trade in New Delhi. But it became an occasion for marshalling the forces of developing countries against the US and other developed nations because it took place soon after Gatt members set up a preparatory committee on a new round.

"Such a round is not a just compromise. We are only entering the preparatory phase in which developing countries will be making their own proposals," Mr Prem Kumar, India's permanent secretary at the Ministry of Commerce and chairman of the conference, said in a summing up statement.

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The Bank of England announces that Her Majesty's Treasury has created on 13th December 1985, and has issued to the Bank, additional amounts as indicated of each of the Stocks listed below:

£150 million 10 per cent TREASURY STOCK, 1992
£150 million 10½ per cent EXCHEQUER STOCK, 1997
£150 million 9½ per cent CONVERSION STOCK, 2001
£150 million 9½ per cent CONVERSION STOCK, 2004

The price paid by the Bank on issue was in each case the middle market closing price of the relevant Stock on 13th December 1985 as certified by the Government Broker. In each case, the amount issued on 13th December 1985 represents a further tranche of the relevant Stock and is in all respects pari passu with that Stock and subject to the terms and conditions applicable to that Stock, and subject also to the provision contained in the final paragraph of this notice: the current provisions for Capital Gains Tax are described below.

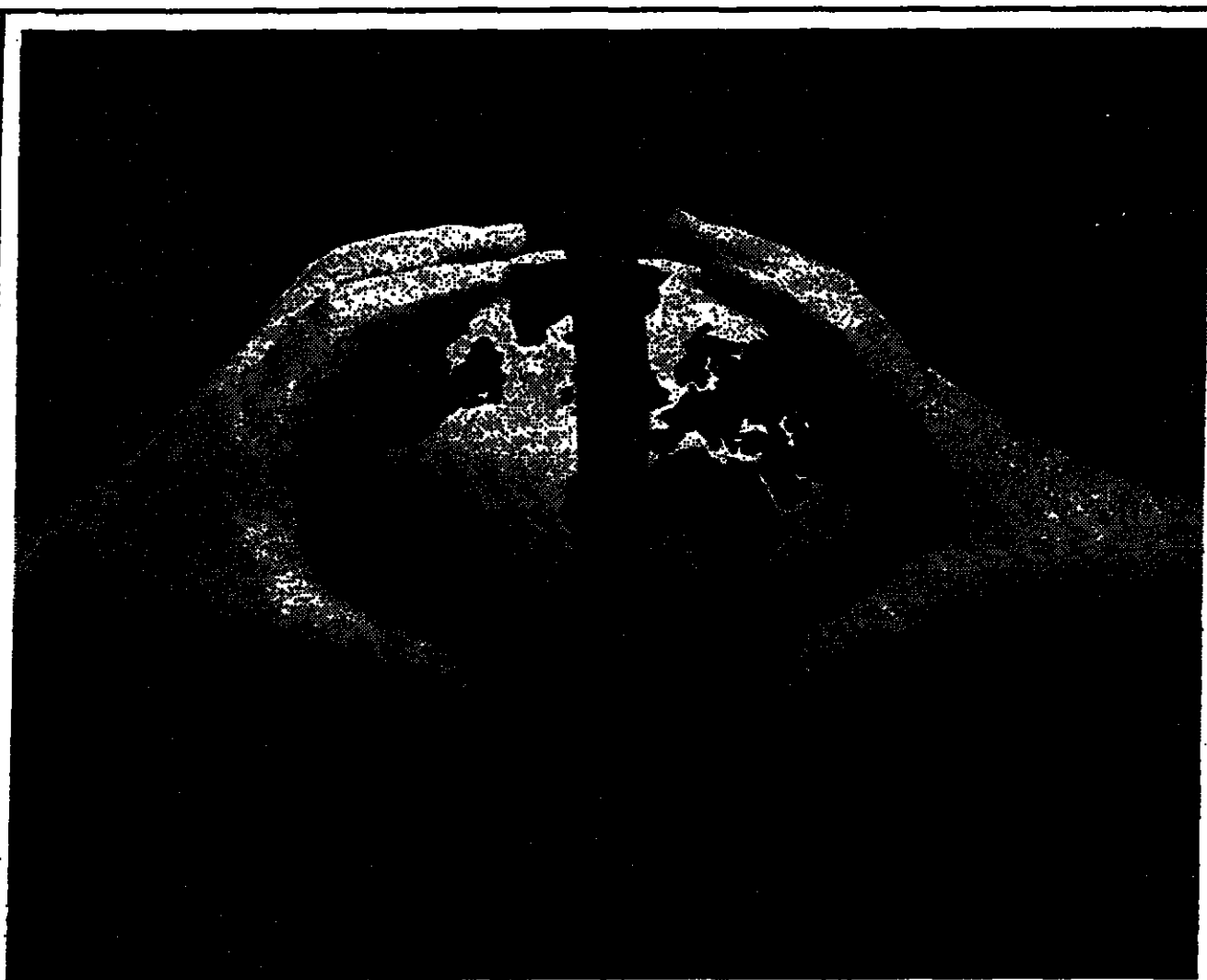
Copies of the prospectuses for 10 per cent Treasury Stock, 1992 dated 11th November 1977, 10½ per cent Exchequer Stock, 1997 dated 14th October 1977, 10½ per cent Treasury Convertible Stock, 1997 dated 27th May 1983 (which contained the terms of issue of 9½ per cent Conversion Stock, 2001) and 10 per cent Treasury Convertible Stock, 2004 dated 13th January 1984 (which contained the terms of issue of 9½ per cent Conversion Stock, 2004), may be obtained at the Bank of England, New Street, London EC4M 3AA. Application has been made to the Council of The Stock Exchange for each further tranche of stock to be admitted to the Official List.

The Stocks are repayable at par, and interest is payable half-yearly, on the dates shown below:

Stock	Redemption date	Interest payment dates
10 per cent Treasury Stock, 1992	21st February 1992	21st February
10½ per cent Exchequer Stock, 1997	21st February 1997	21st August
9½ per cent Conversion Stock, 2001	10th August 2001	10th February
9½ per cent Conversion Stock, 2004	23rd October 2004	10th August

Each further tranche of stock issued on 13th December 1985 will rank for a full six months' interest on the next interest payment date applicable to the relevant Stock. Each of the Stocks referred to in this notice is specified under paragraph 1 of Schedule 2 to the Capital Gains Tax Act 1979 as a gilt-edged security (under current legislation exempt from tax on capital gains on disposals made on or after 2nd July 1984, irrespective of the period for which the Stock is held). Attention is drawn to the statement issued by Her Majesty's Treasury on 29th May 1985 which explained that, in the interest of the orderly conduct of fiscal policy, neither Her Majesty's Government nor the Bank of England or their respective servants or agents undertake to disclose tax changes decided on but not yet announced, even where they may specifically affect the terms on which, or the coupons under which, these further tranches of stock are issued or sold by or on behalf of the Government or the Bank; that no responsibility can therefore be accepted for any omission to make such disclosure; and that such omission shall neither render any transaction liable to be set aside nor give rise to any claim for compensation.

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UK NEWS

UK manufacturers hit by export order books decline

BY ROBIN PAULEY

BRITISH manufacturing industry's order books, especially for exports, have weakened during the past month although not seriously enough to erode confidence about the level of output in the near future, the Confederation of British Industry (CBI) says today.

The latest monthly industrial trends survey from the employers' organisation reports a decline in both total and export order books after signs that orders might be picking up in November.

The survey shows 23 per cent of manufacturing companies reporting total order books below normal and only 16 per cent saying they are above normal.

This is a balance of 7 per cent with lower order levels than normal compared with 5 per cent in November and 13 per cent in October.

The position on export orders is worse with 28 per cent reporting below normal levels and 16 per cent reporting above normal.

This is a balance of 12 per cent with below normal export orders compared with a balance of 5 per cent in November and 16 per cent in October, one of the worst months of this year for orders.

Mr David Wigglesworth, chairman of the CBI economic situation committee, said: "It is rather disappointing to see this decline in orders after what seemed to be an im-

proving trend in November. Some companies seem to have been experiencing more difficulty in selling their products, particularly on the export side.

"It underlines once again how important it is for all of us in British industry to maintain firm control of our costs and particularly our pay settlements if we are to remain competitive in markets at home and overseas."

The results are based on a survey of 1,338 companies before the recent Opec meeting, so it does not reflect any increases in order levels which may have been gained as a result of the fall in sterling which accompanied the fall in oil prices.

Call to raise car demand in Europe with cuts in taxes

BY KENNETH GOODING, MOTOR INDUSTRY CORRESPONDENT

WEST EUROPEAN governments could solve the motor industry's problems of excess production capacity by boosting demand for new cars, a policy which could create between 400,000 and 800,000 new jobs by 1990, according to a report published today.

Such action would cover its cost in many cases through reduced unemployment costs, higher unit sales and increased consumer spending power, says Professor Krish Bhaskar, the motor industry research unit (MIRU) at the University of East Anglia.

Governments could stimulate demand by reducing car taxes and by imposing stricter car roadworthiness standards.

The report points out that car demand is also strongly stimulated by general economic growth. But governments would only be willing to pursue such a policy if it were in line with other objectives because it creates such a wide range of other economic effects.

The report estimates that even moderate cuts in the taxes on the purchase and use of cars would create an extra annual demand for between 1m and 1.6m new cars by 1990.

That compares with West European demand currently running at about 10m a year and the industry's capacity which is estimated to be 12m.

Price has a strong effect on car demand and reducing car taxes, which is within the capability of all European governments, would have the greatest short-term effect on demand, the report suggests.

Reducing running costs appears to have a smaller effect, influencing demand largely by increasing the share of the individual's motoring budget which can be spent on car purchase.

Manufacturers might well take advantage of tax cuts to raise their own prices so as to claw back past and present losses but this would strengthen the industry by providing more income for its future investment programmes, it is argued.

Specific examples have been calculated for the UK, France and Europe as a whole and from these case studies the report estimates car tax cuts would cost the British government between Ecu 330m (\$200m) and Ecu 630m.

Demand growth: a boost for employment, ECU from MIRU, School of Information Systems, University of East Anglia, Norwich NR4 7LZ.

Chloride in US deal for 'super-battery'

BY JOHN GRIFFITHS

CELORIDE, the financially pressed batteries group, has signed a second contract with a US body aimed at further developing Chloride's sodium-sulphur 'super-battery'.

The contract, worth \$9m, is with the US Electric Power Research Institute.

Together with an earlier contract with the US Department of Energy, signed in September and worth \$6m, its target is the demonstration of a 500 kilowatt-hour battery for off-peak electrical power storage.

The sodium-sulphur battery, known as the Beta, is capable of storing four times as much energy as a lead-acid equivalent. Its intended construction is in the form of small self-contained cells. Some

3,000 would be used to propel a vehicle.

Chloride Silent Power, set up with the UK Electricity Council and which received funding assistance from the Department of Trade and Industry, hopes to bring such batteries into production in the early 1990s.

It is acknowledged, however, that a considerable amount of development is required before it can enter commercial production, although Chloride Silent Power believes it still has a lead over Brown Boveri and Hitachi, which are also pursuing sodium-sulphur battery technology.

Chloride sees the sodium-sulphur battery as a technology offering perhaps its brightest prospect for substantial growth.

EEC equal pay claim wins support

By Raymond Hughes

BRITONS employed at the joint European nuclear fusion research station at Culham in Oxfordshire have won strong backing for their claim that they are the victims of pay discrimination.

The European Court of Justice, in Luxembourg has been advised by one of its advocates general that the Britons are correct in their claim that the system under which they are paid only about half as much as staff from other European countries working alongside them breaches an EEC non-discrimination law.

The court will now consider its ruling on the Britons' damages claim against the European Commission and the Council of Ministers.

Culham is the home of the Joint European Torus (JET) undertaking. The regulations setting up JET provided that staff coming from "the host organisation" - the UK Atomic Energy Authority - were to be treated as its employees and paid accordingly.

Bond dealers' tax change

By Clive Wolman

DEALERS in Eurobonds and US government Treasury bonds have been exempted from the harsh tax treatment normally applied to sale and repurchase transactions, the Inland Revenue announced at the weekend.

Over the last two years, Eurobond and Treasury bond dealers, which are mostly large foreign investment banks, have developed a means of releasing some of the capital normally tied up in their bond portfolios. A dealer will sell the bonds to a bank which agrees to sell them again at a specified date and price or at the prevailing market value. This provides the dealer with a simple means of raising short-term finance.

Such sale and repurchase agreements known as "repos" - fall foul of an anti-avoidance provision in the 1970 Taxes Act. This is designed to deter a taxpayer from selling a bond to a non-taxpayer shortly before a dividend is due and buying it back afterwards to escape income tax on the dividend.

Mr Ian Stewart, Economic Secretary to the Treasury, said that the anti-avoidance provision would not be applied against sale and repurchase transactions involving Eurobonds or overseas government stocks denominated in foreign currency.

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65	1248	2479	3819	5104	6456	7775	9037	10114	11559
68	1250	2481	3821	5106	6458	7777	9039	10116	11561
71	1252	2483	3823	5108	6460	7779	9041	10118	11563
74	1254	2485	3825	5110	6462	7781	9043	10120	11565
77	1256	2487	3827	5112	6464	7783	9045	10122	11567
80	1258	2489	3829	5114	6466	7785	9047	10124	11569
83	1260	2491	3831	5116	6468	7787	9049	10126	11571
86	1262	2493	3833	5118	6470	7789	9051	10128	11573
89	1264	2495	3835	5120	6472	7791	9053	10130	11575
92	1266	2497	3837	5122	6474	7793	9055	10132	11577
95	1268	2499	3839	5124	6476	7795	9057	10134	11579
98	1270	2501	3841	5126	6478	7797	9059	10136	11581
101	1272	2503	3843	5128	6480	7799	9061	10138	11583
104	1274	2505	3845	5130	6482	7801	9063	10140	11585
107	1276	2507	3847	5132	6484	7803	9065	10142	11587
110	1278	2509	3849	5134	6486	7805	9067	10144	11589
113	1280	2511	3851	5136	6488	7807	9069	10146	11591
116	1282	2513	3853	5138	6490	7809	9071	10148	11593
119	1284	2515	3855	5140	6492	7811	9073	10150	11595
122	1286	2517	3857	5142	6494	7813	9075	10152	11597
125	1288	2519	3859	5144	6496	7815	9077	10154	11599
128	1290	2521	3861	5146	6498	7817	9079	10156	11601
131	1292	2523	3863	5148	6500	7819	9081	10158	11603
134	1294	2525	3865	5150	6502	7821	9083	10160	11605
137	1296	2527	3867	5152	6504	7823	9085	10162	11607
140	1298	2529	3869	5154	6506	7825	9087	10164	11609
143	1300	2531	3871	5156	6508	7827	9089	10166	11611
146	1302	2533	3873	5158	6510	7829	9091	10168	11613
149	1304	2535	3875	5160	6512	7831	9093	10170	11615
152	1306	2537	3877	5162	6514	7833	9095	10172	11617
155	1308	2539	3879	5164	6516	7835	9097	10174	11619
158	1310	2541	3881	5166	6518	7837	9099	10176	11621
161	1312	2543	3883	5168	6520	7839	9101	10178	11623
164	1314	2545	3885	5170	6522	7841	9103	10180	11625
167	1316	2547	3887	5172	6524	7843	9105	10182	11627
170	1318	2549	3889	5174	6526	7845	9107	10184	11629
173	1320	2551	3891	5176	6528	7847	9109	10186	11631
176	1322	2553	3893	5178	6530	7849	9111	10188	11633
179	1324	2555	3895	5180	6532	7851	9113	10190	11635
182	1326	2557	3897	5182	6534	7853	9115	10192	11637
185	1328	2559	3899	5184	6536	7855	9117	10194	11639
188	1330	2561	3901	5186	6538	7857	9119	10196	11641
191	1332	2563	3903	5188	6540	7859	9121	10198	11643
194	1334	2565	3905	5190	6542	7861	9123	10200	11645
197	1336	2567	3907	5192	6544	7863	9125	10202	11647
200	1338	2569	3909	5194	6546	7865	9127	10204	11649
203	1340	2571	3911	5196	6548	7867	9129	10206	11651
206	1342	2573	3913	5198	6550	7869	9131	10208	11653
209	1344	2575	3915	5200	6552	7871	9133	10210	11655
212	1346	2577	3917	5202	6554	7873	9135	10212	11657
215	1348	2579	3919	5204	6556	7875	9137	10214	11659
218	1350	2581	3921	5206	6558	7877	9139	10216	11661
221	1352	2583	3923	5208	6560	7879	9141	10218	11663
224	1354	2585	3925	5210	6562	7881	9143	10220	11665
227	1356	2587	3927	5212	6564	7883	9145	10222	11667
230	1358	2589	3929	5214	6566	7885	9147	10224	11669
233	1360	2591	3931	5216	6568	7887	9149	10226	11671
236	1362	2593	3933	5218	6570	7889	9151	10228	11673
239	1364	2595	3935	5220	6572	7891	9153	10230	11675
242	1366	2597	3937	5222	6574	7893	9155	10232	11677
245	1368	2599	3939	5224	6576	7895	9157	10234	11679
248	1370	2601	3941	5226	6578	7897	9159	10236	11681
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263	1380	2611	3951	5236	6588	7907	9169	10246	11691
266	1382	2613	3953	5238	6590	7909	9171	10248	11693
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UK NEWS

Brittan claims new law will deter 'fraudsters'

BY JOHN MOORE, CITY CORRESPONDENT

NEW LEGISLATION to be unveiled this week designed to reform the method of regulation of London's financial community will help in the fight against fraud and deception, the UK Government said yesterday.

In a policy speech yesterday in Yorkshire Mr Leon Brittan, Secretary of State for Trade and Industry, said that the new legislation to be contained in the Financial Services Bill should make "the UK an even more unswerving place for the fraudster." But he warned that the bill "cannot of course guarantee that all fraud will be eliminated."

Against a background of attempts by a number of Members of Parliament to include the Lloyd's of London insurance market within the more formal regulatory structure proposed for the City, Mr Brittan said the Government was keeping a "close watch" on events at Lloyd's. "If it became necessary to take action - and to legislate - I would not hesitate to do so."

He stressed that Lloyd's has its own regulatory system and its own Act of Parliament, the Lloyd's Act of 1982. "The events at Lloyd's which have given rise to such notoriety in recent months originated before the act was passed. It is a little early to pass judgment on the effectiveness of the new regulatory regime at Lloyd's."

In the last two weeks, Lloyd's has come under a barrage of criticism from Mr Brian Sedgemore, a Labour MP who has alleged that there has been widespread malpractice in the Lloyd's community and urged for it to be brought within the new legislation.

Mr Brittan said yesterday that he would need to be convinced that the

Financial Services Bill would be the appropriate vehicle "even if it became clear that further legislation for Lloyd's was required."

Mr Brittan said that under the terms of the new legislation those who carry out investment business will have to be authorised by the Secretary of State to do so "or face criminal prosecution if they are not." The power of authorisation, along with related powers of regulation will be delegated by him "to one or two boards made up of practitioners and users of financial services, provided that I am satisfied that their rules meet the specified criteria contained within the bill."

The board or boards will be able to recognise other self-regulating organisations, such as the stock exchange, on condition that their rules set equivalent standards of behaviour.

The system will be set up by statute and will operate within a statutory framework. "It is wholly fanciful to suggest that regulation will be less effective just because it is enforced by those close to the market," he said.

Defending the new regulatory system, Mr Brittan said that "it is not that we wish to adopt a hit-and-run approach to the City or that we are reluctant to take the most vigorous action that may be needed to stamp out malpractice. He believed the approach adopted would result in a better combination of effective regulation and successful firms and markets than an attempt to produce a US-style regulation with a British version of the Securities and Exchange Commission."

He said the sanctions available for use against investment busi-

nesses under the new legislation extend from a simple reprimand through suspension "right up to the removal of authorisation, which will then make it a criminal offence for the person or business to engage in investment business thereafter."

A range of civil remedies will be available to the boards. They will have the power to apply to the courts for a "disgorgement" order to force an investment business to reimburse investors for any loss they have suffered as a result of its breaking the rules, as well as seek an injunction restraining the business from continuing its activities in breach of the rules.

"Because it is a criminal offence, dealing with fraud will always depend on painstaking investigation, with adequate powers for the investigators and adequate powers to back them up," said Mr Brittan. He said that if a forthcoming report prepared by Lord Roskill on procedures in the prosecution of fraud cases "recommends significant changes in court procedure or the law we will consider them urgently. But the Financial Services Bill will itself also have an important role. For by improving both the vetting and control of all those in investment business, it will undoubtedly make it more difficult for fraud to be committed."

He added that the range of civil remedies to be introduced would make it possible "to nip many malpractices in the bud, rather than rely on prosecuting those involved after the event." The provisions in the bill should make fraud less likely to occur in the first place, he said.

City lobby, Page 7

Cabinet plans reform of local taxes

BY PETER RIDDILL, POLITICAL EDITOR

A MIXED system of local taxes for England and Wales will be proposed in the Government's Green Paper (consultation document) on local government finance, to be published in just over a month.

A different approach and timetable for implementation are now certain to be adopted in Scotland. Mrs Margaret Thatcher, the Prime Minister, is this week to chair a meeting of a special Cabinet committee on the subject.

The hope in Whitehall is that the

details of the reform can be completed during the Christmas recess, ahead of ratification by the Cabinet in the first half of January and publication towards the end of the month. But there has been disagreement among ministers over what should be done and there is still no unanimity on the proposals.

The cornerstone of the likely approach will be a per-head tax to be paid by all adults, with even those getting social security benefits paying at least 20 per cent of the tax. The term "poll tax" has been re-

garded as unacceptable because of its associations with registering for voting. Initially, therefore, the term residence charge was used, but the current vogue is for community charge.

In Scotland, the community charge will entirely replace domestic rates (local taxes on property).

In England and Wales, a mixed system involving a combination of the new community charge and a modified form of domestic rates is likely to be proposed.

Kinnock softens line on renationalisation as Labour priority

BY JOHN HUNT

MR NIEL KINNOCK, the Labour Party leader, made it clear yesterday that renationalisation of privatised companies would not be the priority of a future Labour Government.

It would only be able to take these companies back into public ownership "ultimately" after first introducing policies to improve the economy and reduce unemployment.

His words, in an interview on the BBC TV programme This Week, Next Week, will anger the Labour left but please the moderates in the party. It is a considerable watering down of the renationalisation policy.

In another passage that will not please the left he indicated that he favoured state aid for union ballots and a future Labour Government would retain the system with some modifications.

Mr Kinnock said that a Labour Government would not give priority to a "massive repurchase" of privatised companies, but "ultimately" Labour would secure public control and common ownership.

He said he did not want to put a time scale on renationalisation. The overriding priority had to be employment, investment and the development of the economy.

"In our scale of priorities we are not going to be using huge amounts of resources for repurchasing these industries," he said.

At the same time, he emphasised that if they were taken back into public ownership, the shareholders would receive compensation for only the price they originally paid for their investment.

His remarks on state aid for union ballots come at a time when the TUC is at odds over this issue and is considering whether to suspend the KEPTU, the electronics union, and the Union of Engineering Workers for their willingness to accept state aid for this purpose.

He said that in principle there was much to be said for using government funds for ballots so long as it was in accordance with democratic principles.

The present Labour movement policy of opposing such funds had been predicted on Labour winning the 1983 general election.

Now that the funds had been in operation for some time the movement had to "renovate" its ideas on the subject, Mr Kinnock said.

Guinness Peat said its merchant bank, which is privately held, had agreed to buy the 1.75m shares of the group Mr Maxwell bought at the end of last week.

Mr Maxwell, who has publicly allied himself with Britannia, intends to sell his shares and drive down the value of the bid, which is to be largely financed by the issue of

stock. The stake represents less than 1 per cent of Guinness Peat's stock, but a sudden sale might affect the price at a key moment.

Mr Maxwell acquired the shares from Lord Kinnaird, the largest shareholder of Guinness Peat, who has had several rows with Mr Maxwell.

According to Mr Maxwell, Lord Kinnaird told the company he needed to sell the shares to meet a financial commitment next month. Guinness Peat offered to find a buyer today, but Lord Kinnaird sold to Mr Maxwell.

Guinness Peat's offer is to close tomorrow, and the company is expected to announce a small improvement in its terms to win over more shareholders, fewer than 1 per cent of whom have accepted.

Mr Maxwell recently acquired a 5 per cent stake in Britannia Arrow, and has been hinting at the possible existence of rival bidders.

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UK NEWS

City lobby fails to shake common law agency rules

THE EMERGING giants of the new City of London, the conglomerates led by the large clearing or merchant banks, have in recent months been lobbying the Government to ask for a special exemption from the common law principles of agency which serve to protect investors.

But the Financial Services Bill, due to be published on Thursday, will grant them few, if any, concessions.

The conglomerates claim that the common law rules will prevent them from operating effectively in fast-moving securities markets.

However, officials in the Department of Trade and Industry (DTI) have resisted what they see as an attempt to remove the safety net for investors provided by long-established legal principles.

The robust approach of Whitehall may upset not only the City's conglomerates, but also the brokers and salesmen of life assurance and unit trusts.

In the absence of a legal challenge, their practices have strayed far from the basic principles of the law of agency.

Romantics like to characterise the common law as the accumulated wisdom of 10 centuries of English history. But Whitehall officials share their attachment, believing that the common law's basic principles remain valid, even after all the reports and government documents on investor protection of the last three years.

The Financial Services Bill, they say, will merely provide a framework in which those principles can be fleshed out and made easier to enforce in a rapidly changing financial environment.

The detailed rules to be drawn up by the proposed self-regulatory organisations will not oust the common law, but give investors additional rights alongside it, they say.

Since the early years of the century, the London Stock Exchange has insisted that its members divide themselves into stockbrokers, who act as agents for investors by advising them on which securities they should buy or sell and finding for them the best bargain, and stockjobbers who buy and sell shares on their own account.

From next October, however, companies will be allowed to carry out both functions. The danger for the investor is that he may be misled into thinking that his stockbroker or bank will always continue to act as his agent for his best interests, whereas in fact the institution may be buying or selling shares from its own book at the best price it can get.

To ensure that the investor is protected, the Financial Services Bill will enshrine several principles of the law of agency.

It will require an investment business to disclose any material interest it has in a proposed transaction, whether it will be acting as an agent for the client and, if so, what fees it will charge - and any remuneration it may receive from

Clive Wolman explains how the new Financial Services Bill will tighten up the investors' safety net

other parties, for example commission from an insurance company.

In addition, all instructions from a client must be executed to his best advantage.

Several large conglomerates comprising a stockbroker, a stockjobber and a bank are to be set up over the next few months.

In recent months, they have been arguing that the common law principles will make it difficult for them to operate services such as giving advice to an investor on individual stocks and then executing an order by dealing with him off their own books.

The common law requirement of disclosure in such circumstances might oblige them to reveal, for example, whether their book was long or short of ICI shares.

They say this would make it impossible for them to make a market effectively.

In addition, both the conglomerates and insurance brokers have complained that it is artificial to force them into common law strict-jacket of being either the investor's agent or a market-maker/principal who is buying and selling for himself or his company.

For example, a customer goes into a branch of Barclays Bank and fills in a form to sell 100 BT shares. The clerk says the customer can sell the shares directly to Barclays' own market-making subsidiary at a price of 195p.

But the customer then asks: "Will I get a better price if I wait until tomorrow?" If the clerk replies that the market is looking shaky, the legal status of Barclays Bank is changed from principal to agent.

The conglomerates also complain that the common law takes no account of the "Chinese walls" they have set up which are designed to stop any flow of information from one department of a conglomerate to the other.

Thus the bank clerk, or the bank's broking desk, may have no idea of the state of the market-maker's book. But the common law ignores the knowledge of one department to all departments.

To remove the uncertainty, the conglomerates have proposed that the general law of agency, misrepresentation and unfair exemption clauses be replaced by new, comprehensive business rules to be made under the Financial Services Act.

These detailed rules would take into account the particular circumstances of the markets in which they operate. Compliance with the business rules would be a complete defence against any legal action.

The DTI, however, has rejected

this approach. It says that the drafters of the business rules cannot be expected to foresee all future developments in financial markets and all possible areas of dispute and sharp practice.

Where there are lacunae in the rules, the investor must be able to rely on the general law, they say. Otherwise what is supposed to be an investor protection bill would only worsen his position. The attraction of the common law rules is that they are both general and flexible.

Nevertheless, a conglomerate can avoid the threat of legal action by the use of client agreement letters. Such letters might require their clients to exempt them from some of the more rigorous requirements of agency law, for example when quick decisions were necessary.

The common law permits exemption clauses to be included in contracts, provided that they are not all-embracing, their meaning is clear and both parties have understood and freely consented to them. The exemption clauses will be more securely based if they referred directly to the detailed business rules which will be drawn up by the government-appointed Securities and Investments Board or its successor and authorised self-regulatory organisations.

Inspections will be carried out to ensure that the rules are being complied with, for example, that a conglomerate has genuine "Chinese Walls." Compliance with the rules will be a defence, although not an absolute one, against any legal claim.

The DTI's insistence on following the law of agency is, however, difficult to reconcile with one provision in January's White Paper (policy document) concerning insurance brokers, who offer their services as agents of the seeker of insurance.

They will be permitted not only to receive commission from a third party, the insurance company, but will also not have to disclose the amount of commission they receive, provided it conforms to an industry-wide scale.

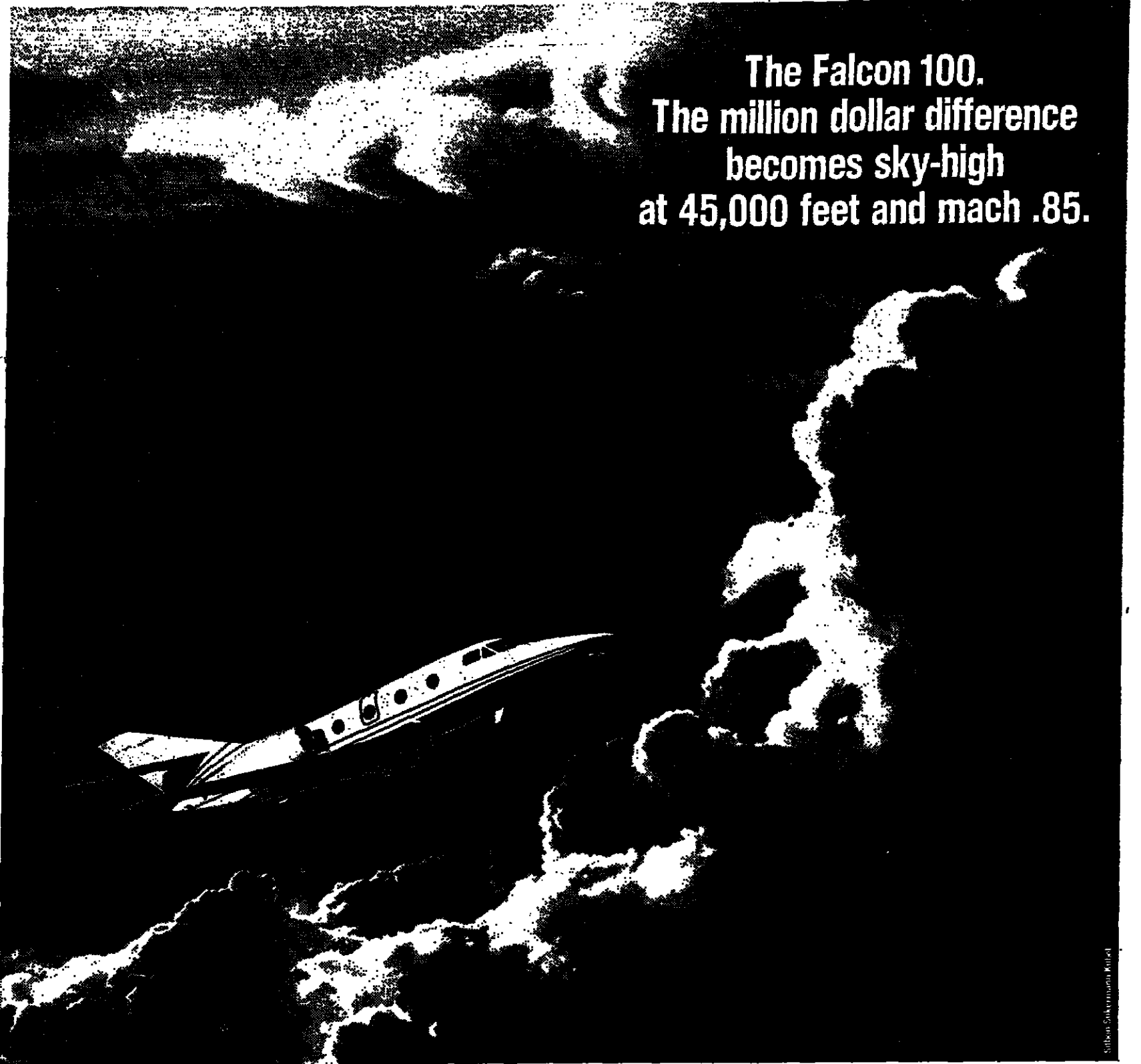
This provision has been incorporated in the proposed rules of the Marketing of Investments Board Organising Committee published on Thursday.

The British Insurance Brokers' Association believes that the common law has made an exception from the general rules of agency for insurance broking.

A leading case dating from the 1870s suggests that a broker need not disclose his commission, if he follows a standard scale of which the insured should be aware.

However, the case concerned shipping re-insurance where the aggrieved party was a large insurance company.

It is doubtful whether any court today would accept that the same principle applies when a door-to-door salesman sells a policy to a housewife who could not be expected to know the terms of an industry scale.



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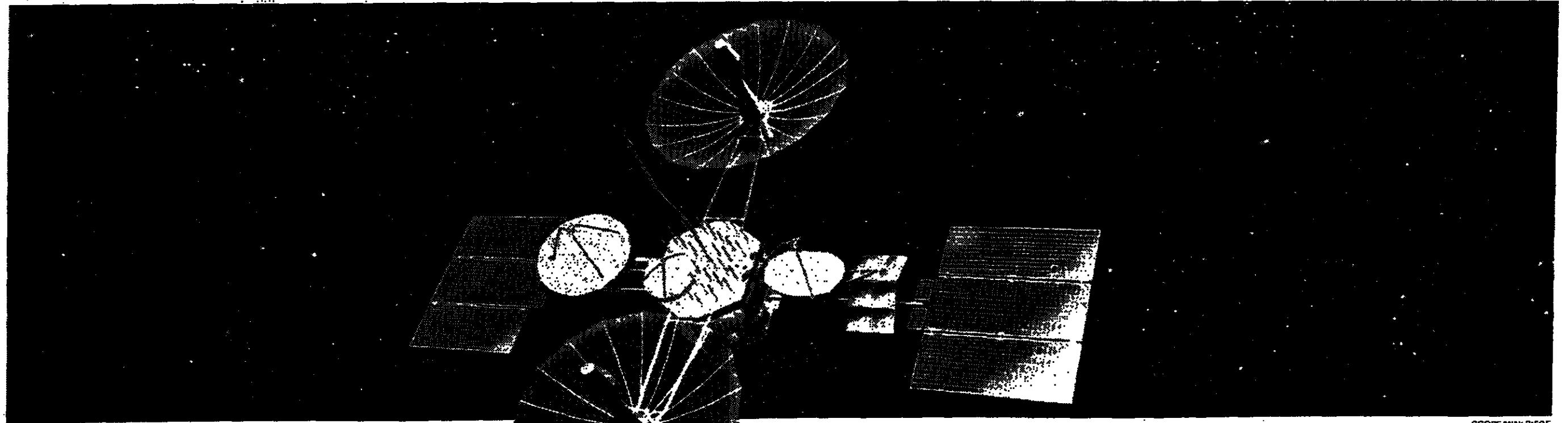
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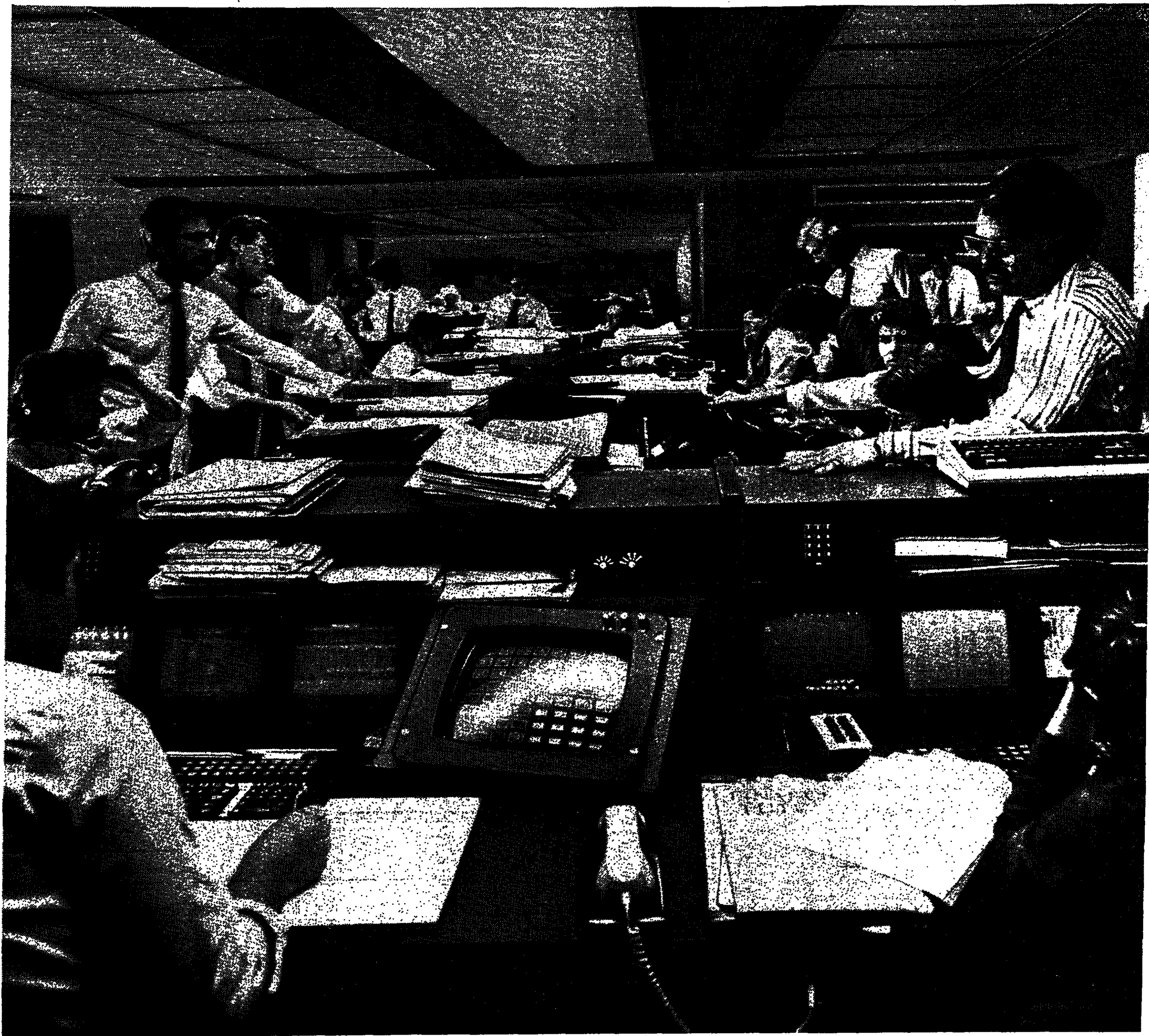
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UK NEWS

THE WEEK IN THE COURTS

Attempt to step beyond the laws of copyright

A MODEST blow for the protection of proprietary information (or intellectual property) was struck last week when Mr Justice Whitford declined to strike out a claim by Dow Jones Co against Ladbroke Index (a wholly-owned subsidiary of Ladbroke Group plc) that the latter has been misappropriating the use of the Dow Jones Index for purposes of its gambling activities.

Dow Jones' claim, which seeks to establish a right to protect its index beyond what the laws of copyright, patent and passing-off provide, is an entirely novel proposition for English courts, but not so legally innovative that the judge was prepared to rule it out of court at the outset of litigation.

Dow Jones is a Delaware corporation, with its principal office in New York. It is primarily a news-gathering and publishing organisation. Among its publications is the Wall Street Journal. It operates several wire services which transmit financial news to subscribers by means of teletype and computer link. Since 1986 Dow Jones has been producing and publishing a price average of industrial stocks.

The average encompasses the stock issues of 30 highly capitalised industrial companies. The companies whose stocks make up the average change from time to time. The selection of stocks used to compute the average is arrived at through the use of expertise and experience, and is based on Dow Jones' determination of which stocks are most representative of the overall activity of the stock market in their individual fluctuations in price.

Information

The Dow Jones Industrial Average (or Dow Jones Index) is computed by adding the prices of the 30 stocks, called the divisor. The purpose of the divisor is to retain continuity in the average in the event of a stock split or a change in the number of shares outstanding. The divisor is adjusted to account for changes in per-share values which are caused by technical factors, such as stock splits or changes in the number of shares outstanding. The value of the divisor keeps the average within a range of numbers which is recognisable as the Dow Jones Average to the public. One of the uses of the Dow Jones Index is to compute the value of the index on a "real time" basis throughout the day and disseminate that information via television, tape and electronic print-outs to a large number of subscribers, including banks, brokerage houses, securities exchanges and commodities exchanges.

Ladbroke established in 1964, provides clients with the opportunity to "speculate" or "gamble" on future fluctuations of three of the leading stock market indices and the price of gold. One of these is the Dow Jones Index. Ladbroke obtains up-to-date information on the Dow Jones through the Teletext service. For a charge of about US\$1,000 (£700) a month Ladbroke receives use of a teletext terminal and up-to-date information. Armed with this information, Ladbroke's clients bet by buying and selling their selected index at the quoted price.

The name of Dow Jones is used by Ladbroke in connection with its gambling operations. Potentially this might give Dow Jones the basis for a claim of passing-off. The late Lord Diplock said in a case in the House of Lords in 1979 that it was possible to identify five characteristics which need to be present to create a valid cause of action of passing-off. They are: (1) misrepresentation (2) made by a trader in the course of his trade (3) to prospective customers of his or ultimate consumers of goods or services supplied by him (4) which is calculated to injure the business or good will of another trader and (5) which causes actual damage to a business or goodwill of the trader by whom the action is brought.

The fundamental difficulty facing Dow Jones in its present litigation against Ladbroke is the element of misrepresentation. Some time back, following a complaint by correspondence, Ladbroke included a disclaimer in its advertising literature to the effect that Dow Jones Inc has no connection with Ladbroke. Dow Jones regards the disclaimer as a sleight of hand. The alleged misrepresentation is that Dow Jones' business is connected with the stock index futures contract. The disclaimer, it is claimed, reinforces that connection, rather than operate as a dissociation.

The doctrine of misappropriation is founded upon a common law principle which the US Supreme Court in 1918. The court upheld an injunction against the practice of the Hearst organisation, International News Service, of copying news gathered and published in the eastern part of the US at great expense by Associated Press, and transmitting it to customers on the west coast for a profit. The court said that in doing this the defendant admitted that it was taking material that has been acquired by Associated Press as the result of organisation and the expenditure of labour, skill and money and that in appropriating it and selling it as its own it was "endeavouring to reap where it has not sown."

Dissent

The court added: "Stripped of all disguises, the process amounts to an unauthorised interference with the normal operation of complainant's legitimate business precisely at the point where the profit is to be realised, in order to divert a material portion of the profit from those who have earned it to those who have not... The transaction speaks for itself, and a court of equity ought not to hesitate long in characterising it as unfair competition in business."

Unfair competition is the problem. Even then, there was a powerful dissent from Mr Justice Brandeis which has been adopted in many courts, most notably last year by the High Court of Australia. But other courts in the US have developed the doctrine. They have enjoined unlicensed media from making commercial profit by use of sporting events mounted by others. In none of these cases, however, did the plaintiff have a claim of copyright in the information. Dow Jones will now proceed to trial. Lawyers and their commercial clients will watch with interest to see whether English law is prepared to protect commercially useful information in a way that the law of copyright has so far failed to provide.

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Monday December 16 1985

The future of Westland

THE ARGUMENT within the Thatcher Cabinet over the future of Westland, the helicopter maker, can be seen on two levels. There is the philosophical clash between the activist school of industrial policy represented by Mr Michael Heseltine, Defence Secretary, and the hands-off approach associated with ministers who are close to Mrs Thatcher. The former is pressing for a European solution to the company's problems; the latter group seems content with whatever decision the directors believe is in the best interests of shareholders. But the government is also committed to a policy of strengthening the European defence industry through collaboration and rationalisation, so that European manufacturers can match the economies of scale enjoyed by the Americans. If governments think that restructuring is needed, they will have to use their purchasing power to bring it about.

These conflicts have led to a lack of consistency in the government's approach to Westland. Although the company's immediate crisis stems from a lack of orders, the underlying problem is that it is too small for the business it is in. It needs either to be part of a larger group or to form collaborative arrangements with other firms to offset its disadvantages of scale.

Driving force

In the summer the company was told that it could not expect any short term help from the Government. It had to find its own salvation. But when salvation took the form of a prospective alliance with Sikorsky of the US, the world's largest helicopter company and a subsidiary of United Technologies, Mr Heseltine felt obliged to intervene. The result was a counter-proposal from the Italian, West German and French helicopter companies, together with a commitment from defence minister to rationalise their helicopter purchases and development programmes on a European basis.

The driving force behind this proposal is fear of US domination. The European helicopter industry is weak. It has too much capacity and too many employees. Two of the main reasons for this are the inevitable consequence of

US faces the fiscal facts

FOR FIVE years, President Ronald Reagan has been pulling off one brilliant conjuring trick after another. Outside America it has been his economic wizardry which has drawn the most attention. Conservative politicians and financiers in Europe and Japan may have jeered that his stunts with Keynesian deficit financing were the crassest form of cheap trickery but they could never quite conceal their grudging admiration for the results.

From the American perspective it was not in economics but in politics that Mr Reagan performed his most impressive sleights of hand. The main objections to Reaganian ideas have always rested on fears of inflation among the public and the financial markets. Mr Reagan was able to make refutation work by putting those fears to rest.

He did this first through vehement denunciations of the very budget deficits which he had brought about. Secondly, he managed to retain the confidence of his conservative political supporters in the financial markets by breaking the time-honoured link between fiscal laxity and the liberal social spending which budget deficits had increasingly been used to finance. In part Mr Reagan's achievements in squeezing social spending were again a consequence of the budget deficits which he simultaneously created and denounced.

Indeed, there was a brilliantly simple formula to many of his economic and political successes. He said one thing, did the opposite and got the credit for both. He promised to balance the budget, and went on promising it, even as he launched the biggest refutation in US history: eventually he was re-elected by a landslide as the anti-inflationary President who pulled America out of economic slump. His supporters used to say that their fiscal policies could only be "done by mirrors" and the trick worked well enough for a while. It was only after last November's elections that the mirrors began to crack.

The latest and most important crack in those mirrors came last week with the passage through Congress of the Gramm-Rudman balanced bud-

get bill. What matters about this law are not its precise provisions, which may not stand up to the constitutional scrutiny of the Supreme Court, never mind the political horse-trading of a protection year in Congress. Rather it is the clarity with which it exposes the tough but simple challenge for American fiscal policy in the coming years. There are only two ways of reducing the budget deficit — by raising taxes or by cutting the military, and the civilian, components of public spending. Realistically, after the welcome reductions in non-defence spending implemented over the last four years, there is only one way of moving the deficit significantly below its present level and through a combination of tax increases and major cuts in defence spending.

Backsliding

Outside America it has long been clear that these unattractive choices would be the only way out of the US deficit dilemma. Indeed, one of the reasons why European governments have tended to dismiss the Reagan Administration's demands for fiscal stimulus as a counterbalance against the planned tightening of fiscal policy in America has been the realisation that a President who rules out the increases and insists on maintaining his military build-up is unlikely to deliver on his promises to cut the budget deficit.

To the American public, however, Mr Reagan's celebrated powers as a communicator had long obscured those obvious facts of fiscal life. The Gramm-Rudman amendment, for all its crudities and complexities, should make it much harder for Washington to conceal the truth about its fiscal actions in the future. This does not necessarily mean that the US will cut its budget deficit. Indeed, major backsliding has already occurred over the deficit target for the current fiscal year. But it may force American politicians to face up to the real economic consequences of their decisions on taxes and public spending. At least the odds will be on those who produce the deficits, with President Reagan at their head, to justify them, instead of pretending they are somebody else's responsibility or trying to make them vanish into thin air.

American bankers

AMERICAN BANKERS, who started last August's rush for the South African exit by calling in some of their short-term loans, were not impressed by the rescheduling proposals put to them by Dr Fritz Leutwiler last week.

But even if the technical details of the package had been more acceptable, the absence of a political dimension ruled out a more positive response from bankers whose main preoccupation is not South Africa, but the loss of business from domestic customers motivated by the anti-apartheid crusade.

Politics, and the advisory finger of President P. W. Botha in his famous speech in Durban on August 15 when he said that South Africa had crossed the rubicon of apartheid reform, sank the rand. Politics will continue to decide its fate, and that of the economy generally, in the months ahead.

This simple message is well understood by the business community which has bombarded the government with statements and press advertisements calling for the scrapping of all racially discriminatory legislation. Businessmen have even embarked on their own foreign policy by speaking out in foreign forums and undertaking a pilgrimage to Lusaka to talk to the banned African National Congress (ANC). But the message seems to have been lost on the politicians. A senior South African editor who discussed the government's reform programme with ministers recently was deeply discouraged to find that the main question was how foreign bankers were likely to react to the reforms to be introduced next year, but what would be the reaction of the Conservative Party (CP) and Right-wing white voters. They gave 45 per cent of their votes to the CP and the even more right-wing Herstigte Nasionale Party (HNP) in last month's five by-elections.

The three-month extension until March 31 of the original four-month debt standstill announced on September 1 means that President Botha and his government have one more chance to pursue the national community that South Africa is genuinely committed to the abolition of apartheid.

The chance to make that breakthrough will come at the end of next month when President Botha makes his policy speech at the opening of parliament in Cape Town. How he makes his address will be almost as important as what it contains. On August 15 he dis-

mayed much of his local and all of his foreign audience on both counts with a truculent "don't push us too far" delivery of a speech singularly lacking in the new policy departures touted in advance by his Foreign Minister and others.

The irony is that a speech which reinforced the stereotyped image of intransigent Afrikanerdom abroad failed to impress the voters of Sasolburg, usually let drop during a visit to South Africa long before apartheid and in any case it was not the Afrikaners but the English colonialists who first built racial discrimination into the system.

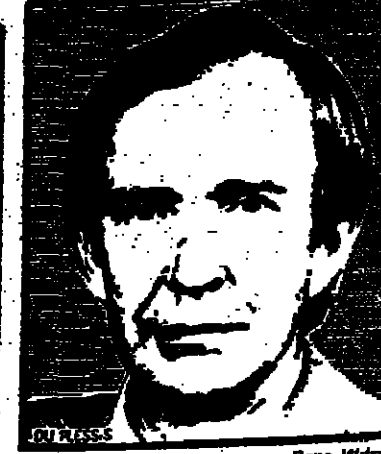
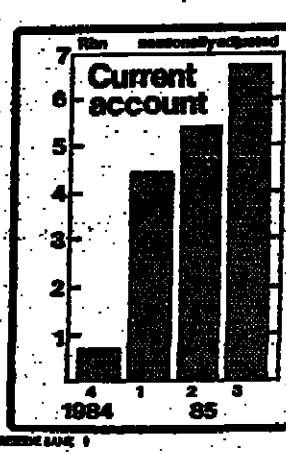
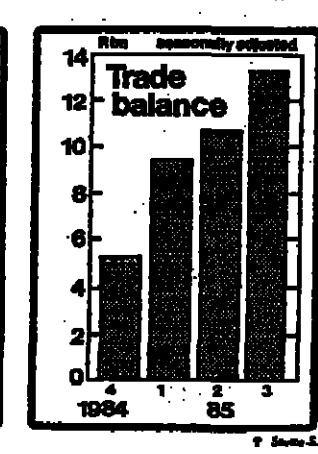
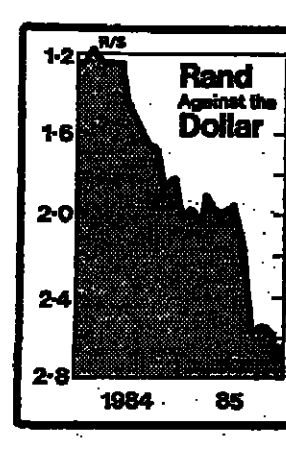
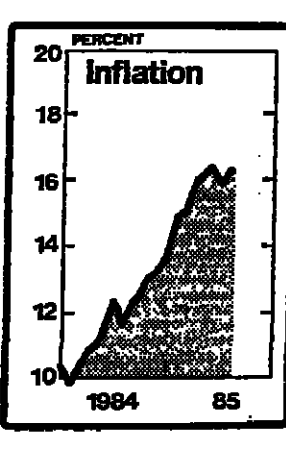
That old habits die hard was emphasised just a few weeks ago when Mr Chris Heunis, the Minister of Constitutional Development (and master of the art of obfuscation and incomprehensible language), casually let drop during a visit to Soweto that the Government intended to allow all black citizens to buy freehold property in the townships, provided they have the money to do so and provided land is available.

The right to purchase also extends to those who were deprived of their South African citizenship under the homelands policy but are shortly to have it restored according to a promise made in September.

But it took three days of persistent questioning by reporters and others before it became clear that, for those with money, section ten of the Black Urban Areas Act, which lays down strict rules for legal residence in a black township, is a white area, was now in abeyance. It is still not clear, however, whether this is intended as a limited substitute for the abolition of the pass laws, or as a precursor of their abolition.

Mr Botha's January speech will stand or fall on its treatment of the President's Council of Advisors. A precedent for inflexion control and the whole hated apparatus of pass laws. These not only restrict the movement and residence of black people but subject them to humiliating harassment and have sent over 15m blacks to jail over the last 30 years, many of them several times over. An unambiguous declaration by Mr Botha that inflexion control

SOUTH AFRICA



A time to be brave, a time to be clear

By Anthony Robinson in Johannesburg

only to dash them. The government has yet to pronounce on an influx control while Mr Botha's response to the HSRC report was the dry observation that racial tension had existed in South Africa long before apartheid and in any case it was not the Afrikaners but the English colonialists who first built racial discrimination into the system.

Had the Government moved on this front three or even two years ago (before introduction of the controversial tri-cameral constitution and the accompanying economic recession) much of the impetus behind the violence and radicalisation of the past 21 months which has cost nearly 1,000 lives and changed the nature of black politics and aspirations, might well have been dissipated. As it is, key moves on the socio-economic front such as abolition of influx control will no longer stop parallel demands for an end to the state of emergency, curbs on the abuse of police power, the release of political prisoners and the start of genuine negotiations about power sharing with black leaders, including those like Nelson Mandela, leader of the African National Congress, who are still in jail or in exile.

What these demands imply is the opening of a Pandora's Box fraught with risk and potential conflict. In fairness it is a decision which is easier for foreigners to urge than a government responsible for the consequences to accept. But the unexpected decision of foreign bankers of all people to pull the plug on apartheid has created a precedent which is a precedent for change which is proving more effective than decades of moral outrage.

With the population increasing at 2.8 per cent a year, mostly in the black community, steady economic growth of around 5 per cent is required to make a dent in unemployment which is at present unofficially estimated at around 25 per cent of the estimated 12m

potentially active working population. Economists estimate that only 3 per cent growth is possible from domestic sources, at best. Foreign investment is essential for the growth which could make black political emancipation meaningful.

But what of the immediate economic future? Despite an inflation rate of 16.8 per cent, three times the OECD average, the authorities have switched priorities from the fight against inflation to mild stimulation of the economy through tax cuts, higher government spending, including a R600m job creation scheme, and lower interest rates.

The Reserve Bank has cut its bank rate seven times since May and commercial banks' prime rates have dropped to 16.5 per cent (that is to say below the inflation rate) from 25 per cent over the same period.

After a drop of at least 0.5 per cent in the GDP this year, growth is expected to rise by 3 per cent next year—provided that exports are not seriously affected by trade union or consumer boycotts, that the good spring rains continue to give an exportable maize surplus and good harvest generally and that consumers recover confidence.

Hitherto, the main positive feature to emerge from the sharp recession and collapse of the rand over the last 18 months has been the current account surplus which was running at R6.9bn on an annualised basis in the third quarter of 1985. Import volumes have been depressed by the recession while export volumes and receipts have been greatly increased by rand depreciation. According to the Reserve Bank, export volumes rose by 43 per cent between the third quarter of 1983 and the second quarter of 1985. Omnibusly, however, export volumes dropped by 3 per cent in the third quarter of this year with coal, iron ore, sugar and wool shipments all lower.

stancial current account surplus in order to finance debt servicing (all interest payments continue on the \$24bn debt despite the freeze on capital repayments on the \$14bn of private sector debt) inevitably casts a shadow over growth beyond 1986.

Governor de Kock and Finance Minister Barend du Plessis justify the deflationary policies now in train by the absence of demand-push inflation (as opposed to cost-push inflation) and pressures still being transmitted through the depreciated rand). They also point to the considerable degree of under-utilised capacity, and the need to stop the rise in bankruptcies and unemployment.

But higher government spending, 33 per cent above budget estimates over the first seven months, is viewed with concern by economists and the private sector who resent the high taxes and swollen bureaucracy. The authorities have ceased making predictions about the gold price. But with 50 per cent of hard currency earnings coming from this source alone, and over 75 per cent from the mining sector in general, they are looking anxiously at the turmoil in oil markets and the likely impact on currencies, world inflation and gold.

The rand is subject to as many external influences as the yellow metal. Governor de Kock, ever the optimist, recently forecast a stronger trend as the effect of trade leads and lags distortions unwind in the new year. But with an estimated \$3.5bn maturing next year out of the \$10.3bn of debt not covered by the capital repayment freeze, downward pressures will continue, unless creditors agree to roll-over or reschedule.

What South Africans wonder is whether the international bankers would be prepared to help finance the huge sums required if apartheid reform is to lead to positive structural changes in the economy.

It was a point made by Arthur Hammond-Tooke, chief economist of the Federated Chambers of Industries, who remarked a propos of the debt rescheduling talks that "what South Africa needs is not rescheduling but refinancing."

This is why South Africa is seeking not just an agreement for the orderly repayment of its \$24bn foreign debt but a "normalisation" of financial flows which will allow the economy to grow at a faster rate than will be possible if the country is forced to become a net capital exporter for the next decade and beyond.

Stirrings in the Bretton Woods

"For the first time after 40 years you have the development of a constituency in the political system for support of these institutions," says Charles Walker, a former under secretary at the US Treasury.

Walker is talking about the Bretton Woods committee, formed to support the World Bank and the International Monetary Fund (which were shaped at the original Bretton Woods conference).

The committee has just released a statement of support for US Treasury secretary James Baker's third world debt initiative.

Policy statements are not really the committee's bag. It is gearing itself up for future battles in Congress over the financing of the World Bank, and its soft loan arm, the International Development Association. In the next year or so Congress is going to have to vote for or against a more active, and ultimately more generously funded, World Bank.

The Bretton Woods committee boasts the support of a wide range of businessmen including Thornton Bradshaw, chairman of RCA, and Douglas Danforth, chairman of Westing-

Men and Matters

house Electric, as well as some of Washington's most influential figures.

Also on the membership list are two men, Richard Debs Morgan Stanley, and John Hennessy of Credit Suisse First Boston, who have been mentioned as possible successors to Tom Clusen as World Bank president.

Supporters of the World Bank and the IMF recognised after the near-defeat in Congress two years ago of the IMF quota increase, that an organised nationwide effort to build support for the bank, and the fund, was needed.

The Bretton Woods committee has recently held three of a planned series of 20 conferences around the US to try to explain to sceptic Americans that the bank and the fund are not simply, as many of their critics maintain, organisations to bail the banks out of lending blunders in the developing world.

Paper money

Andre Fontaine, the editor-in-chief of Le Monde, has good reason to be feeling pleased.

When he took over the paper almost a year ago its finances were in bad shape, its staff demoralised and its readers beginning to wonder whether the paper could survive.

Now the picture is altogether different. Le Monde has raised FF15m in fresh capital from its readers, well in advance of the deadline for the closing of subscriptions.

The backing marks a turning point for the paper.

Fontaine, who has spent most of his working life at Le Monde, and who presides over it like a person shepherding his flock, prepared the ground well.

First, he carried through painful cuts in staffing and salary costs. Then he sold the paper's offices in the Rue des

offshoot, is taking charge of the company's internal team of consultants (outside North America and Europe) from a London headquarters.

British-born Michael Thomas, aged 42, who comes from a Sheffield steelmaking family, is following Banks as managing director of the Kearney British company.

Thomas graduated in history from Cambridge and went for a spell on the engineering shopfloor in Peterborough. Later he took a business degree at the European Institute of Business Administration, Paris, and then joined Kearney. He has been running the group's Benelux operations.

He has his eye on London's burgeoning financial services industry where, he says, "bankers need business management."

Tory faces

Much innocent merriment at Westminster over the appointment of two sharply contrasting parliamentary private secretaries at the Department of Education and Science.

Both are women. The fascination to Westminster-watchers is that they represent symbolically, in their contrasting ways, the two faces of the Conservative party.

Edwina Currie, who will be pps to Sir Keith Joseph, education secretary, is the epitome of the able, highly ambitious, Thatcherite. She makes her points forcibly and at length in the slightly harsh accent of the Midlands.

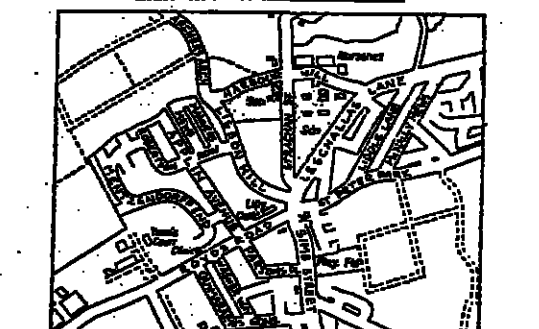
In contrast, the brightest of the younger "wets," Chris Patten, the minister of state for education, has picked a very different Tory lady, Virginia Bottomley, to be his pps.

She comes from an upper middle class background of service to the community, as the daughter of John Garnett of the Industrial Society. She used to work for the Child Poverty Action Group.

Is someone at DES trying to make a point.

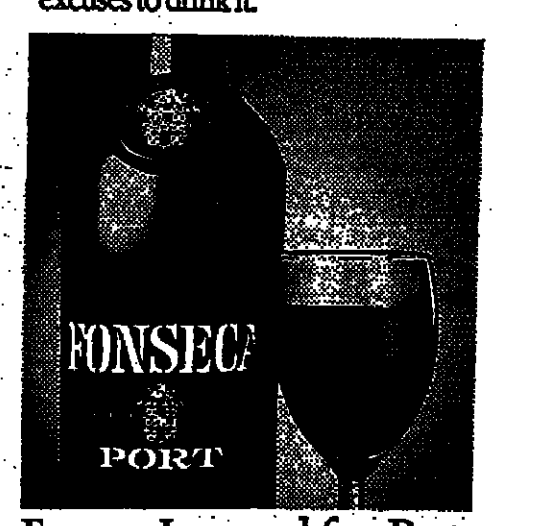
Observer

No. 57 in an unending series of excuses to drink Fonseca Port.



"I am celebrating the new T-junction on the B4721 between Swangle and Poges"

The British have always loved port and need no excuse for drinking it in great quantity. If you like fine port, celebrate with Fonseca!



Fonseca. In a word, fine Port.

Foreign Affairs: Arms Control

Leverage, linkage, and the Little Phrase

By Ian Davidson

PRESIDENT Ronald Reagan and Mr Mikhail Gorbachev have told the world that they intend to give greater impetus to their joint arms control negotiations. But if so, how is this greater impetus going to show up when the formal negotiations resume in Geneva next month? Which are the issues which constrain, lock the door to greater progress—and which side will have to move first?

The most interesting novelty in the Geneva summit communiqué was a little throw-away phrase which referred to "the idea of an interim INF agreement." This little phrase caused a lot of people to prick up their ears, because it implied new evidence of Soviet movement, and suggested that the first progress in the new round would be made on intermediate-range Nuclear Forces, that is, on Euro-missiles, rather than on long-range strategic forces. But logic and leverage point to a quite different conclusion.

The Geneva talks are formally divided into three sub-negotiations: strategic nuclear weapons; intermediate-range Nuclear Forces (INF); and space weapons, which is short-hand for President Reagan's Star Wars anti-missile defence programme. From the beginning, the Russians have not merely insisted on the indissoluble link between these three sub-negotiations, but have also tried to muddy the distinction between strategic weapons and INF, on the grounds that both types can reach Soviet territory. The US, by contrast, has from the beginning tried to separate the three baskets. In the hope of getting an arms control deal without having to offer any concessions on Star Wars.

So if Mr Gorbachev is ready for an interim INF agreement, that suggests a slackening of the Soviet link between INF and the other two baskets. The more the Russians move in this direction, the more encouraging it looks to the US; American officials are openly prepared to describe the little phrase as a Good Thing.

It also looks like A Good Thing for a different reason. For years now, the Russians have tried to negotiate away America's right to carry any medium-range missiles in Europe, without conceding a comparable ban on their own SS-20 missiles. They claim that there should be a "Euro-strategic" balance, in which the SS-20s would be set against the British and French nuclear forces.

Now it was never easy to make much consistent sense of Soviet proposals, which at one moment seemed designed to deny the legitimacy of any US medium-range missiles in Europe; at another to redefine them as "strategic," which is

tantamount to conceding that their deployment may, after all, be legitimate. Moreover, it is absurd to expect the US to side with the Soviet Union in an INF agreement whose implementation would depend entirely on other countries (Britain and France) which were not party to it.

The message implied by the little phrase is partly confirmed by a recent shift in the Soviet position at the formal Geneva negotiations. There they have suggested a new type of Euro-balance, in which the US would keep 100 cruise missiles (but none of the super-accurate Pershing II ballistic missiles), while the Soviet Union would deploy as many SS-20s as were required to balance the combined total of these US missiles and the British and French forces.

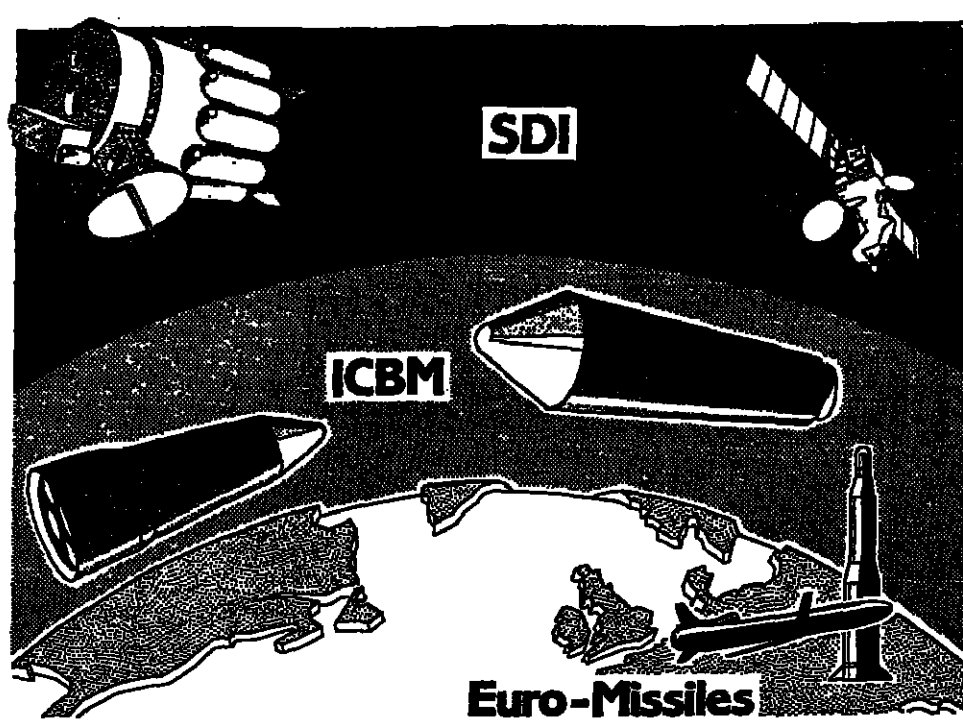
Invariably, the word "interim" sounds an ominous warning note: this preliminary agreement would be followed by another, in which all 100 US cruise missiles would be removed. Obviously the US could not agree to either part of the proposal as it stands. But an optimist might say that it may represent an important stepping-stone towards the recognition that if the Soviet Union wants an INF agreement with the Americans, it will have to be an agreement about American and Soviet weapons, not about the weapons of some other countries.

So does the optimist go on to conclude from that a deal on INF, even in interim form, is likely to be the first thing to emerge from the Geneva negotiations? On the contrary, he

wonders if the Soviet moves on INF may not be a preparation for much more serious negotiations on long-range strategic weapons. There may eventually be an INF agreement, or there may not; but in any case it is unlikely to emerge until agreements are within reach on the two biggest issues, strategic nuclear weapons and Star Wars.

The purpose of these negotiations is, after all, to find solutions for some of the anxieties of the two super-powers, and it is the most serious anxieties which will be the key to the final outcome. The major anxieties are: for the Americans, the size and accuracy of the Soviet multi-warhead land-based missiles; and for the Russians, the potential threat of a new and destabilising arms race. Unless these two anxieties can be contained and traded off against each other, there is virtually no chance of an INF deal. The Russians may be worried by what they see as the Euro-missile threat to Moscow; they may even be worried by the planned expansion of the British and French nuclear forces; but their chief concerns are unavoidably concentrated on the strategic American arsenal (because of its size and power), and even more on the possibility that Star Wars will precipitate an unpredictable strategic revolution.

The Americans, for their part, have little reason to be worried by the Soviet SS-20 missiles, because they are not directly threatened by them. They were worried, on political grounds, lest the Euro-missile controversy should undermine the NATO Atlantic Alliance; but we have



got round that dangerous corner, and even the Dutch have decided to stay in line. Since the Americans have no burning need for an INF agreement of any kind, the Russians have no leverage for imposing an agreement that is inequitable.

The same order of priorities holds true for the west Europeans as well. They obviously want an INF agreement, and they want it more than the Americans, because they are threatened by these weapons. But even for the Europeans, the big prize would be a big agreement, and that means strategic nuclear weapons and Star Wars. The Russians may be able to play their propaganda games with the Europeans, but they will not be able to persuade them to give top priority to INF, and they know it.

The Russians know a number of other things as well. If their top priority is to put a padlock on Star Wars — and everything suggests that it is — then the only key to closing that padlock is a deal on strategic nuclear weapons, because that is Washington's top anxiety. The Euro-missile issue is not important enough to the Americans to extract concessions on Star Wars. Moreover, the link is even tighter than that: Star Wars may be a Utopian vision of a better world, but it is also a response to the perceived threat of the Soviet land-based missiles.

Secondly, they know from bitter experience that it is not enough to sign an agreement with a US Administration. In the past 13 years the Soviet Union has signed a number of control agreements with the US

(the Threshold Test Ban Treaty, the Peaceful Nuclear Explosions Treaty, and the second Strategic Arms Limitation Treaty), but none has been ratified by the US Senate. If Mikhail Gorbachev's proposal of 50 per cent cuts in strategic weapons is a serious bid, and not just a propaganda ploy, it follows that he must be aiming at a final deal which will stand the minute scrutiny of the Hill; it may even have to look slightly biased in America's favour. If the price is a US concession on Star Wars. To go through the domestic hassle of a dramatic 50 per cent offer, to conclude a deal in Geneva, and then see it thrown out by the Senate, would be a calamity for everyone, not least for Mr Gorbachev.

This has several implications, and one of them is virtually certain: the Senate will not agree to count the British and French forces as part of the American arsenal. For one thing, the Jackson amendment requires any future US-Soviet treaty to be based on equal numbers of weapons; for another, the US will not accept treaty obligations which could be upset by independent actions of London or Paris.

Thirdly, since the British and French forces cannot be counted as part of the US totals, it would seem to follow that any British and French contribution to an arms control package can only take the form of unilateral, free-standing undertakings not to increase their arsenals above a certain size. [For example, the UK might undertake not to put more than six warheads on each Trident missile, not to put more

than 12 missiles on each Trident submarine, or even not to build more than three submarines. (The Treasury would like that...)]

But whatever the eventual British and French contribution, the Russians know that it will be the last piece to fall into place. Assuming Mrs Thatcher is still in power, these two governments will offer no concession on their small nuclear forces until they see, first the depth of the cuts being agreed by the super-powers, and second, the guarantees that their forces will not be rendered "impotent and obsolete" by the spread of anti-missile defence.

By the same token, US concessions on Star Wars will be the second last piece to fall. The Americans know that Star Wars is the lever which, first, brought the Russians back to the negotiating table, and then induced them to offer 50 per cent cuts.

The inference would seem to be that, if the Russians are seriously intent on getting an arms deal with the US, then their first priority will be to move on long-range strategic weapons. Of course, Mikhail Gorbachev can choose to play long, soft and slow, in the hope of a political shift in his favour. A Labour Prime Minister in Britain, an SPD Chancellor in Germany, or a détente-minded President and Senate in the US. But if he has any sense of urgency about the next summit, or the one after, it is likely to show up on the big board — long-range strategic nuclear weapons.

Lombard

Memo for budget weekend

By Samuel Brittan

"IF ANYTHING can be misunderstood," it will be misunderstood," in my Winston Memorial Lecture, I questioned the present fashion for small, highly paid, labour forces at a time when employment is the major economic problem.

As a result, I have been accused of every sin — from believing in a "hump of demand" to "knowing better" than the paid directors of British business, or being against a high growth prosperous economy. I have tried to knock these misconceptions on the head in the fuller published version (Two Cheers for Self-Interest) to be published on Thursday by the Institute of Economic Affairs.

The most interesting criticism of it has come from Sir John Hoskyns of the Institute of Directors, who thinks it illegitimate to try to second-guess the decisions of a managing director in the firing line. I hesitate to take him on, because the institute has taken the lead in promoting ideas which would enable labour and other markets to work better — most recently plans for simple legal changes which would make it easier for individual workers to claim self-employment status and thus contract out of the whole collective bargaining treadmill.

If all pay bargains were individual contracts chancellors and economic commentators would indeed be well advised to keep their distance. But as Sir John himself explains, many are not. The predominant model is still, as Sir John concedes, "collective bargaining within an adversarial relationship" — often buttressed with some degree of monopoly, especially in the public sector.

Unfortunately, the collective bargaining model influences decisions even where unions are weak, both through a desire to keep them that way, and through a climate of opinion which, whenever there is any margin of uncertainty, gives preference to higher pay over more jobs.

My criticism of the Chancellor is not that he denounces excessive pay settlements in The World at One but that he stops at exhortation. A financial incentive that benefited companies which favoured jobs over pay would do far more than any amount of words to signal a new climate of opinion. The incentive is neither difficult nor expensive. It could consist of a remission of either corporation tax or National Insurance contributions to a company which, to enumerate alternative variants:

● Increased its labour force by more than a threshold percentage; or

● Increased pay per head by less than another threshold; or

● Did both (a belt and braces approach).

This has the great advantage over the much canvassed across-the-board reduction of employers' contributions in that by definition it would not apply where the concession is eroded in pay increases.

If, for instance, the incentive applied to enterprises employing 2m workers at the rate of £500 per head the annual cost would be £1bn.

The payroll incentive has the great advantage over the Lazard-SDP inflation tax in being a bonus rather than a penalty. Thus problems of definition and demarcation would not be so crucial. The onus would be on employers to apply.

It has the further advantage of being reasonably easy to apply in a regionally differential form, as the Secretary of State for Industry might note.

Obviously, abuses would accumulate if the scheme applied for decades, and corporate reorganisations were designed to establish fictitious increases in employment or artificially low pay increases.

But until a more competitive and individualised labour market can be established a payroll incentive could be a valuable transitional measure, which would itself encourage more fundamental change.

It would almost certainly do far more good for jobs than any feasible basic rate tax cuts or threshold increases, or more infrastructure spending.

Those who care to shed more than crocodile tears about unemployment will use every working day until the pre-budget Treasury weekend on January 11-12, to campaign for the payroll incentive in place of the generalised distribution of largesse to those of us with the good fortune to have jobs already.

The danger of generalisation

From the Chairman, Guest Keen and Nettlefolds
Sir, — Mr Griffiths letter (December 5) on the subject of a career in industry underlines the national problem of a loss to reply because I assume, he had neither the knowledge nor experience to do so.

He could, however, as a tutor, have pointed out to his student, that it is not intelligent to generalise from limited data and anecdotal evidence. The unfortunate experiences of a few family friends who have tried him the biased vituperation shown by such phrases as "pompous administrators," "dogmatic accountants," "disgruntled trade union leaders," are not enough to condemn the whole of British industry. I hope the student is more careful and thorough in his computer programming or the "baroque line garbage out" rule will apply.

Sir Trevor Holdsworth, 7 Cleveland Row SW1

Sunday with the family

From Mr S. Benians
Sir, — Mr A. Ward (December 10) expresses the hope that the British family will follow the Continental custom of eating their Sunday lunch together at a restaurant. After doing so, I am sure Sunday morning shopping.

I fear that this is not likely to happen, except on a very small scale. As was reported

Letters to the Editor

recently, a senior businessman on a visit to this country, on asking how British workers could afford to take their families out to a restaurant on "babe's night" was told that they could not.

Disposable income in Britain is too low to afford the luxury of lunching out with the family on Sundays.
S. M. Benians, 3, Popes Green, Strawberry Hill, Twickenham, Middx.

Livestock marketing

From the Secretary, London Meat Futures Exchange
Sir, — One accusation unfortunately all too commonly levelled against farmers is that they want their cake and to eat it. John Cherrington's article on supermarkets' buying practices (December 3) does nothing to dispel the sentiments behind the comment. On one hand the facility of fixed price contracts for livestock is demanded while on the other the right to participate in open markets if the price looks attractive is respected. Seemingly, the two requirements are contradictory.

The livestock industry is notoriously volatile and likely to become more so, which has made any development towards

fixed pricing or forward contracting with the livestock farmer fraught with risk.

This fact was uppermost in our mind when we established this exchange. The formation committee noted that the prices traded on the exchange would give the industry a price basis on which to base contract agreements, which uniquely resists to current market forces nationwide.

In addition, farmers like Mr Cherrington are now able, as he requests, to have the opportunity of short- and medium-term fixed prices for livestock, while being able to participate in open market price opportunities without jeopardising the budgeted contract performance.

The only requirement to achieve these benefits is active participation. In doing so, the farmer may leave speculation behind where it currently exists — in the physical trade.
C. H. Prior-Willeard, 24-28 St Mary Axe EC3.

Let there be variety

From Mr M. van Mesdag
Sir, — Cocoa butter is a vegetable fat. Its main disadvantage is its high cost. That is why many cheaper vegetable fats from alternative raw materials

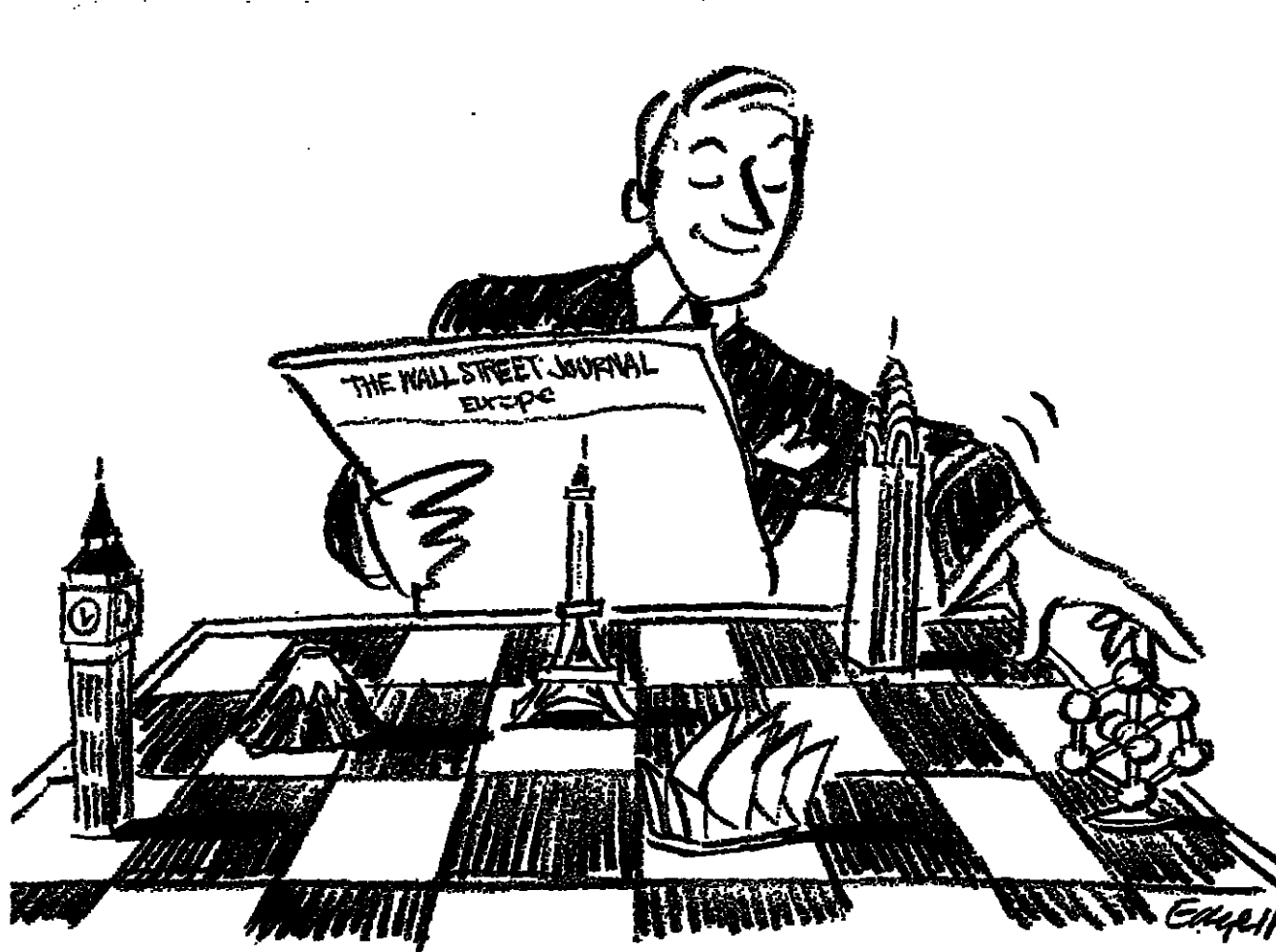
are used to replace some or all of the cocoa butter in a whole host of products all over Europe; much of the brown, chocolate-flavoured material used in bakers' confectionery is of this kind.

The problem mentioned in "KFF" was lyrical over chocolate" (December 11) arises because in Britain, Ireland and Denmark, the industry is allowed to substitute cocoa butter to a maximum of 5 per cent of the recipe and still call the end product "chocolate." In the other European countries products so formulated may not be sold as "chocolate." Since his discrepancies occur in the case of many other food and drink products — sausages, ice-cream and beer and milk are examples.

Clearly, it is in the interest of the industry as well as consumers that (a) the widest possible variety of products at varying price levels should be available everywhere; (b) that those products are called "chocolate" if they are perceived as such by consumers; (c) that in each case — consumers are informed of what they are buying, and (d) that the law imposes no discrimination against products because where they are manufactured.

Judgements passed by the European Court ever since the "Cassis de Dyon" case seem to suggest that such a more liberal view will prevail in the end.

The consumer, happily, will vote with his purse.
Martin van Mesdag, Leeward House, Ferry Road, Epsom-on-Crouch, Essex.



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THE WALL STREET JOURNAL EUROPE

GO STRAIGHT TO THE TOP

From the Chairman, Intellectual Property Sub-committee, City of London Solicitors Company

Sir, — The article by Dr A. H. Hermann entitled "A half-baked patent conference" (Dec 5) requires a response. Mr Hermann suggests that HMG has not been listening to experts on this subject. This Company submitted a memorandum for HMG's benefit at the diplomatic conference. As to the complication and high cost of English patent litigation, we submitted a comprehensive memorandum for improving patent litigation in 1983.

The introduction of the Community patent has been held up for 10 years by lack of ratification by two of the smaller countries, Denmark and Ireland. It is not surprising therefore that pressure has mounted for proceeding without them, in the hope of course that they may help to overcome their difficulties.

The latest draft of the protocol on the litigation of Com-

munity patents is a much better document, although we have suggested a number of further improvements. The protocol largely recognises that the issues of infringement and validity are so often inter-linked that it is inadvisable to separate them. The national court will have exclusive jurisdiction for all infringement actions and also counterclaims for revocation of the Community patent, this being the most common means of attack on patent validity. The only restriction is on putting validity in issue in the less common action for a declaration of non-infringement, but we have submitted that even in this case the Court should be able to consider validity and make a ruling on it at least between the parties.

We are also concerned about the extent (and thereby cost and time) of proceedings if all infringement and validity questions are to be heard not only by national courts of second instance but also (excepting solely national law questions) by the new Community Appeal

Court (COPAC). We have suggested that consideration be given to putting only specific questions to COPAC for its adjudication. We recognise that COPAC has to be a court of appeal in the Continental sense of a full rehearing in order to have some uniformity of decisions, bearing in mind the differing jurisdictions from which appeals will come. We also, however, submitted that any major points of interpretation of the Community patent convention and the protocol be referred directly from the national court of second instance to the European Court of Justice and not necessarily via COPAC.

We firmly propose the merits of the British system of adversarial litigation in the High Court, involving as it does full discovery and cross-examination of witnesses and a special Patents Court, which we believe is becoming more highly regarded in Continental and other circles. While having the greatest respect for the qualities of patent agents, we do not believe that their train-

ing qualifies them to conduct litigation. Disputes about patents frequently give rise to other legal issues, often involving an examination of different legal and equitable rights and remedies. Solicitors involved in patent litigation are likely to have acquired their detailed knowledge and expertise of intellectual property law against a much wider background of qualification and practice in the law.

I would respectfully suggest that we would all be better served by the business community (including small and medium sized businesses) if we pressed for urgent review of High Court patent litigation — and indeed of the whole High Court litigation procedure. To reduce complication and costs, we urge, inter alia, an earlier identification of the issues and evidence in patent litigation and more powers for the judge to keep the case moving without undue delay.

N. Fox Bassett, Roper House, Aldermanbury Square, EC2.



Monday December 16 1985

Michael Morgan
on Wall StreetTrading on
electronic
wizardry

ON A QUIET day, the New York Stock Exchange proudly boasts, it uses more computer power to run its trading and surveillance systems than NASA employs to make a satellite space launch.

The electronic wizardry is the result of some \$150m of investment over the past seven years.

The trading systems handle a daily volume that has grown to an average of 107m shares so far this year. On August 7 last year, the computers coped with the record 236m shares that changed hands, and in a recent simulation, they managed to turn over the equivalent of 421m shares.

Fuelling the growth in turnover has been a surge in merger and acquisition activity, which, the exchange admits, has been accompanied by an increase in the number of questionable transactions.

In recent years, virtually every important merger has first been signalled by a sharp rise in stock prices ahead of the formal announcement. To counter that, a series of computer systems has been designed to keep track of trading as it occurs.

Last Thursday, the exchange expressed concern about trading in RCA and General Electric stock and launched an investigation into market activity in the days leading up to the merger announcement late on Wednesday.

RCA stock had surged 10% in trading on the NYSE and other regional exchanges earlier in the day, on volume of more than 5m shares. During the previous two days, the price had risen 8% again in heavy volume.

Stock trading in both companies had already been monitored through Stockwatch, a real-time check of all NYSE trades as they occur. Stockwatch is programmed to alert surveillance analysts to any deal that exceeds predetermined limits.

A "blip" from the system prompts an approach to the company whose stock has been traded to establish whether a corporate statement or development may account for the unusual activity. Analysts will also check whether the price movement is the result of market rumours, press comment or a broker's recommendation of the stock.

If no simple explanation is found, the stock will be put on special watch, and, of the 50 or so alerts each week, most that half will lead to a further review of the case.

That review will employ the talents of Isis - Intermarket Surveillance Information System - a database of all trading and clearing information of NYSE-listed stocks, whether the trade occurred in New York, on the American exchange, or in Boston or Philadelphia.

Its most sophisticated feature is the audit trail, which provides a full picture of the trade, based on information supplied by the buy-and-sell-side brokerage houses.

"Now you have a full picture of what happened on the floor of the exchange from the time of the trade, the price and the volume," says Ms Agnes Gautier of the NYSE's market surveillance services. "You know who were the actual bodies on the floor who executed the trade and cleared it."

"The analysts can access the information in any way they want. For example, they can ask who traded a particular stock, who traded it between 10 and 10.30, and which was the biggest clearing firm."

"Any data can be extracted in any fashion. Based on that information, we can build up reports on, for example, stocks that closed on upticks or concentrations of buying. If a firm suddenly represents 30 per cent of the buying, we are interested."

"The information is completely manageable here by the analyst, and this is a great step forward."

A third system, Asam - or Automated Search and Match - will speed investigations into insider trading when it is fully operational next March.

The database will hold the names of directors and officials of NYSE-listed companies and their subsidiaries - the people who would be involved in merger and takeover talks. More than that, it will include information on their school and college education, clubs to which they belong, other directorships and details of their family. The names of lawyers acting for the companies, together with accountants and public relations staff could quickly be added by the companies involved.

In an investigation, the system would cross-check the names of stock purchasers and sellers against the names on file, seeking out connections.

So do the systems work? "I am happy that they do catch people," says Ms Gautier. "Perhaps if you are not too greedy, you will not see you. I am not too sure that the SEC would pursue you either if you were not making a profit."

MIXED HOPES OF SUCCESS AS MEETINGS ON ITC DEBT GET UNDER WAY

Vital week for tin crisis talks

BY STEFAN WAGSTYL IN LONDON

THE CRISIS in the world tin market, which arose nearly two months ago, is set to reach its climax this week.

After weeks of delay, the members of the International Tin Council, which has run out of money trying to support tin prices, say they will decide on Wednesday whether to negotiate with the council's creditors. The ITC owes hundreds of millions of pounds to its bankers and to the brokers of the London Metal Exchange.

Many of the 22 member governments have been briefing their delegates at the weekend. Ministers from EEC countries are expected to decide a common position at a meeting in Brussels tomorrow.

At the LME the betting - or perhaps the hope - is that a negotiated settlement of the crisis is in sight. The 13 brokers with tin council contracts believe the council is ready to bargain.

The 16 creditor banks are more cautious. Unwilling to contemplate the repayment of anything less than 100 per cent of their capital, they are under less pressure to make concessions to the tin council than the LME companies, which in some cases might collapse without a deal.

But brokers, bankers and ITC delegates all acknowledge that they have very little time left. Brokers believe the LME authorities will have to reopen the tin market, suspended since October 24, very early in the new year, possibly on January 6.

Mr Ralph Kestenbaum, spokesman for the 13 brokers with tin council contracts, has said the deadline for real progress in the talks with the ITC is on Friday.

If negotiations go ahead, they will centre on ways of minimising the cost of running down the tin council's stockpile. The ITC needs bridging loans of about \$340m (\$480m) - the \$550m originally proposed is now seen as too high - on top of its existing \$350m borrowings to complete its outstanding forward purchases, which are due by the end of January. Thereafter, the stockpile would be sold off and the loans repaid. However, most of the council's tin has been bought at well above the \$2,140-a-tonne suspension price. If prices settle at \$2,000 a tonne when trading resumes, there would be a loss of about £150m to £200m, plus interest.

ITC member governments are worried about two things - first, the cost and risk of bridging finance; and second, the uncertainty of the eventual loss, which would not be fixed until the whole stockpile was sold - perhaps in five years' time.

The banks, led by Standard Chartered, say they are flexible about amount, terms and cost of loans. However, they reject loss-sharing "in any form." Any such compromise solution would create a most dangerous precedent for the stability of the international financial system, they said in a statement yesterday.

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Country	% share of ITC financing
Malaysia	20.4
Indonesia	12.5
Thailand	10.9
Australia	4.6
EEC	24.7
(including W. Germany)	8.2
(including France)	5.1
(including UK)	4.1
Japan	18.4
Others	8.5
	100.0

Apart from the UK, which has a special concern for the LME's welfare, most of the members have so far refused to commit themselves to contributing to a settlement.

They have denied from the outset any legal responsibility for the council's debts. But slowly political considerations have come to the fore.

For the leading tin producers - Malaysia, Indonesia and Thailand - the key concern is for the future of their tin industries, which employ hundreds of thousands of people. They would rather spend public money protecting those jobs, in some cases with domestic subsidies, than bailing out the LME.

However, they feel that a negotiated settlement might be in their interest as it would help to control the expected fall in prices, thereby minimising the loss in revenues to the mining industries. They also argue that as developing countries they can hardly afford to contribute

as much as wealthy tin-consuming nations.

For the consumers, the issue is how to get out of a tin agreement that many of them did not want to join in the first place, with the least trouble. Since the first post-war International Tin Agreement was signed in the 1950s, the consumers have come to believe that the pact, originally designed to keep prices stable for the benefit of producers and consumers alike, has come to serve the interests of producers alone.

Several members, notably West Germany, wanted to follow the example of the US, which quit when the current Sixth ITA was signed in 1982 but were persuaded to stay for the sake of international goodwill.

Britain's EEC partners are now particularly annoyed that the UK is calling on Community solidarity to try to persuade them to help to fund a settlement. They are reluctant to rescue the LME; in their view, new markets could easily be set up in Paris or Hamburg.

However, broader political considerations might carry the day. By adopting the UK's approach on tin, West Germany and France and the smaller EEC countries would be well placed to ask for a few favours in future Community tussles. Similarly, Japan would do itself no harm in the eyes of the Asian countries, which are important trading partners, by supporting a settlement.

Concern about the need to balance issues of investor protection without stifling City markets will also dominate the Financial Services Bill, which will cover most financial markets outside banking, including securities and other investments, financial futures and its assurance.

It is designed specifically to meet the changes in the City where the deregulation of the stock exchange is creating new multi-faceted financial conglomerates, many of them with strong potential conflicts of interests.

Mr Brittan has promised that the new bill will contain fresh anti-fraud measures.

But the bill will also endorse the policy of City self-regulation through a single Securities and Investments Board with powers delegated to it by the Trade Secretary. It will exclude regulation of Lloyd's despite recent scandals in the insurance market because Mr Brittan believes it is too early to say that the 1982 Lloyd's Act by which Lloyd's regulates itself has failed.

British Speech, Page 6

UK to move on banking and financial services supervision

BY DAVID LASCELLES, BANKING CORRESPONDENT, IN LONDON

THE UK Government this week takes two major steps in its efforts to create a new and more effective regulatory structure for the UK financial services industry. Both are considered to be crucial to strengthening confidence in the City of London at a time when rapid changes in the financial markets and a series of scandals threaten to weaken it.

Tomorrow, the Treasury is expected to publish its White Paper (policy document) on the reform of banking supervision, prepared in the wake of the Johnson Matthey Bankers (JMB) affair. On Thursday, Mr Leon Brittan, the Trade Secretary, will present the government's long-awaited Financial Services Bill to the House of Commons. The bill will establish a system of regulation for the City after next year's "Big Bang".

The Banking White Paper, prepared after lengthy consultations by the Treasury and the Bank of England, will propose reforms of the 1979 Banking Act, and is expected broadly to follow proposals put out by the Bank earlier this year to boost its supervisory role.

Specific changes needing amendment of the 1979 Act include abolishing the two-tier banking struc-

ture of licensed deposit-takers and recognised banks and replacing it with a single category of banks. But the Government is under pressure not to enshrine too many reforms in statute so as to preserve some of the flexibility of the present system.

Key issues which the Treasury may prefer to leave to the bank's discretion are the enforcement of limits on large loans to individual customers - and the right which the Bank is seeking to engage in a dialogue with a bank's auditors.

Other less controversial points include the redefinition of deposits to take account of new instruments that are appearing in the financial markets, improvement of the deposit protection scheme and procedures for appeals against the Bank's rulings.

The Government wants to bring a new Banking Bill as soon as possible early next year. The Labour opposition has already said that the measures being proposed will not remedy the inadequacies of UK banking supervision, as exposed by JMB. Labour MPs have called for a new bank audit commission and the removal of responsibility for bank-

ing supervision from the Bank of England.

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Shultz attacks Soviet domination

By Leslie Collett in Berlin and David Buchan in London

MR GEORGE SHULTZ, the US Secretary of State, yesterday visited two Warsaw Pact capitals - Bucharest and Budapest - after delivering a hard-hitting weekend speech in West-Berlin challenging the Soviet Union's domination of Eastern Europe.

The Soviet news agency Tass has criticised his East European tour as a "hopeless attempt" to undermine the unity of the Warsaw Pact and to "divide" its members. The criticism was also seen as a warning to East European countries not to be taken in by American blandishments.

The Secretary of State said in his speech that, by remaining in Berlin, the US and its British and French allies demonstrated that they did "not accept" the incorporation of Eastern Europe into "Soviet spheres of influence." Mr Shultz said the nations of Eastern Europe were denied the right - set out in wartime and post-war agreements including Yalta - to decide their own form of government and way of life.

Before embarking on his three-day tour of Romania, Hungary and non-aligned Yugoslavia, Mr Shultz said each had its "own identity" and his talks in each capital would show the US "appreciated and supported" their individual policies.

In talks in Bucharest with President Ceausescu, Mr Shultz pointed out that mounting Congressional criticism of Romania's human rights record might influence Washington's annual renewal of Bucharest's most-favoured-nation (MFN) tariff status in the US market.

Members of Congress have urged withdrawal of MFN status because of Romanian restrictions on emigration and treatment of ethnic and religious minorities. Romanian officials have accused that US trade preferences are legally tied only to emigration, which has become freer from Romania.

As he began talks with Mr Shultz yesterday, Mr Ceausescu scolded foreign reporters for writing "unrealistic" stories about his country. He also said US-Romanian relations "could be better." The US Secretary of State was due in Budapest last night.

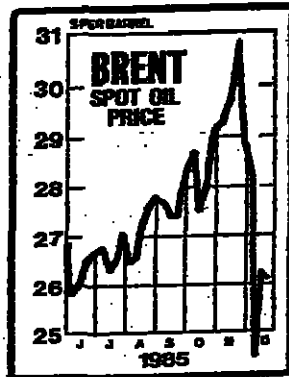
In his speech to the West Berlin Press Association, Mr Shultz repeatedly spoke of the injustice of the division of Europe, Germany and Berlin. He emphasised that "Soviet and East German goals have not changed in Germany or in Europe." Mr Shultz also addressed "some Berliners" who were asking why, 40 years after the Second World War, they were still living under allied sovereignty in West Berlin.

"They ask whether this is not the time to make some changes," he said. "But I think we all understand the continuing conditions that make these arrangements still necessary."

Before coming to West Berlin Mr Shultz had talks with West German Chancellor, Mr Helmut Kohl, on SDI, the strategic defence initiative (star wars), and forthcoming disarmament negotiations with Moscow.

THE LEX COLUMN

Opec's barrels of misery



People do not generally join a club which is known to be quarrelsome, has drunk the cellar and cannot repair the roof, and it is little surprise that Opec's invitation to the world's other producers to re-deem the cartel's inefficiencies has been received without enthusiasm.

The response of Mrs Thatcher and Mr Lawson was clear enough: if oil revenues are to leave no room for the breed of tax breaks next year, then the people must eat the cake of lower inflation. As for the markets, they gave the organisation a quick whiff of what the brave new world could mean, trading one cargo at \$21.80 a barrel or almost a third below last month's peak spot market level.

Yet although the Opec communiqué makes strange reading, there is justification for it. Saudi Arabia has been widely signalling for some time that it will not tolerate levels of production as low as the 2.5m barrels a day (b/d) of the summer. One can only speculate at the assumptions being made in Riyadh about the country's domestic and international security at low levels of oil revenue and about official attitudes to Saudi foreign-currency holdings, which are dwindling now even more quickly than in the late 1970s. But it cannot be in the Saudi interest to leave untapped assets that will be producing long after the platforms have vanished from the North Sea.

Saudi Arabia's attempts to maintain price through collective output control founded on national egoism of its fellow Opec members; understandable, perhaps, that a heavily populated country such as Nigeria should be unwilling to sacrifice living standards at home for the sake of tiny and prosperous societies in the Gulf. In those circumstances, Saudi Arabia acted in September just like an old-fashioned oil company with too much production and too few marketing outlets: it set off downstream. But in inviting the major oil companies to take a portion of its upstream margin in return for the commitment of refining and marketing outlets, Saudi Arabia is temporarily suspending its historical policy of price support.

It was yet another warning to the rest of Opec to make room for Saudi production, it has not yet worked: additional Opec production since September has worked through into industry stocks and the spot price was under pressure even before the Geneva meeting.

As oil prices very much lower than \$20 a barrel would cause serious disruption but it is hard to imagine Saudi Arabia wishing a debt service crisis on Nigeria or Venezuela - let alone Mexico, for which a \$1 drop in the oil price could mean a half-billion-dollar fall in oil revenues wholly committed to debt service.

Nor could a country so dependent on the health of the banking system rejoice in the collapse of some Texan banks, which are unlikely to be very well reserved against production loans at a \$15 barrel. Equally, with no market price to act as a peg and with the non-Opec

producers selling at market or market-related rates, there seems no obvious reason why a price fall should halt at \$15 a barrel; and Saudi Arabia will merely have doubled its production while receiving less than half the price. For the moment, the market seems to have adjusted to Saudi ambitions to have a \$2 fall in the price. Saudi Arabia is as yet still producing within its old quota of 4.25m b/d on a quarterly basis; should it resolve to produce more, another price adjustment will be necessary.

Taxing currencies

The taxation of currency gains and losses is a subject on which Parliament - perhaps understandably - has remained almost completely silent and the Inland Revenue has responded only when pressed by a House of Lords decision (and that a year after the event). So irritated were several major companies by the lack of clarity and apparent illogicality of the tax treatment that they commissioned the Institute for Fiscal Studies to report on the matter.

The findings, published last week, claim that the Revenue makes an arbitrary distinction between "base" and "circulating" capital which sometimes makes it impossible for corporate treasurers to hedge their foreign currency exposure and otherwise distorts the decisions they take. For instance, it is usually in a company's interest to borrow in a high-coupon, depreciating currency because it can win tax relief on the coupon payments but does not have to pay tax on the capital gain it incurs by using fewer pounds to repay the loan.

To remove these distortions, the IFS proposes that companies should be taxed on the gains and losses of all monetary assets, but only on "permanent" or long-term fluctuations in value. The idea is that companies should not be penalised or rewarded for short-term exchange-rate changes, but only on the expected change in long-term rates, calculated by reference to forward rates or interest rate differentials.

The scheme may be too complicated to enforce - but it at least reduces the potential for abuse of the present system, which should please the Revenue. And it would insulate companies from paying tax on arbitrary fluctuations in rates over which they have no control.

FINANCIAL TIMES SURVEY

Britain and France are on the brink of deciding finally to go ahead with building a fixed transport link between the two countries. Four competing schemes offering a variety of ways to cross the Channel are now being evaluated.

Year of decision for project of the century

THE BRITISH and French Governments will almost certainly decide in the next few weeks to go ahead with one of the world's largest construction projects, the building of a fixed link across the Channel.

Plans involving various combinations of bridges and tunnels, backed by some of Europe's biggest companies have been lodged with the two governments, which are expected to announce their decision by mid-January.

If the project goes ahead, it will be the most ambitious development undertaken by either country. Costs estimated by the schemes' promoters range from £3bn to more than £9bn after allowing for the effect of interest charges and inflation. Millions of tonnes of steel and concrete would be used in construction and up to 75,000 people could be employed on the link at the peak of the work.

The French Government and more recently the British, strongly support the project. They perceived it as highly attractive, and a potential vote winner during the run-up in the next two years to national elections in both countries.

Mrs Thatcher in a recent interview with the Financial Times said: "I am very anxious to get the Channel link going because I think that our generation needs to do something that is exciting."

The matter, however, is not yet decided and crucial issues have still to be considered.

The key to the development is that it must be financed entirely by the private sector. No government financial guarantees

will be given by either country. It is this aspect, more than any other, which will decide which, if any, of the four schemes submitted last month, will receive the go-ahead.

The availability of private finance is not the only issue to be considered. More than 15,000 pages of technical, financial, economic, safety and environmental information, studies and drawings have been submitted by the promoters.

By Andrew Taylor

A fixed link, if it went ahead would have considerable impact on regional and national economies and not just through the temporary creation of thousands of extra jobs during the five years or so of construction.

The sea ferries which ply between the two countries would be seriously curtailed and some routes would undoubtedly be shut down. European Ferries which operates the Townsend Thoresen line says it would continue to compete on the busy Dover-Calais route but would be forced to close many of its longer haul regional routes if even only a small amount of traffic were diverted to a fixed link.

The British arm of Sealink, owned by Sea Containers, the Bermuda-based shipping group and ironically one of the companies seeking to build a fixed link, has given a warning that it will sack all 2,600 workers on its short sea routes to France and Belgium the day a fixed link opens.

Mr James Sherwood, chairman of Sea Containers, says that the only hopes of saving the jobs would be to give his company the mandate to run the fixed link which would take on the redundant ferry workers.

On the other hand, jobs may be created in Dover and the surrounding county of Kent by companies moving near to the portals of a Channel tunnel or bridge in the same way that businesses have moved to Reading, Slough and Windsor, along the M4 to the southwest of London to be close to Heathrow Airport.

Three-fifths of all UK exports and imports now go to or come from other EEC countries. Kent, with the construction of the M25 orbital motorway around London, already connecting this part of South East England with the national motorway network, could become an increasingly attractive base for companies trading with the Continent.

The depressed areas of northern France would similarly benefit as industry and commerce moved closer to the French end of a fixed link.

This would have important implications for regional job creation and planning policies. While French authorities may be delighted at the prospect of companies moving to high unemployment areas in northern France, the British reaction to industrial and commercial development at its end of the link in prosperous Kent, often called the Garden of England, might be more mixed.

French enthusiasm for the project, however, is not simply



UK contenders flank government ministers. Left to right: James Sherwood of Channel Expressway; Sir Nigel Brookes of Euro-Route; David Mitchell, Transport Under-Secretary; Nicholas Ridley, Transport Secretary; Lord Layton, of Eurobridge; and Sir Nicholas Henderson of Channel Tunnel Group

based on prospects for revitalising depressed areas of northern France. It sees a fixed link as a great opportunity to extend its high speed rail network, based on the successful TGV (Train à Grande Vitesse).

British government enthusiasm for a fixed link has arisen more recently.

The change in British attitudes in the last 18 months largely reflects Mrs Thatcher's new-found belief in the project. Her imagination has been fired by the scale of the venture and, most importantly, she has been convinced by advisers like Lord Young, Employment Secretary, and industrialists like Sir Nigel Brookes, chairman of Trafalgar House, that the private sector can and will finance a fixed link.

The big question is whether international banks and financial institutions will supply the large development loans and investment necessary without

the official safety net of government financial guarantees. Unofficially the promoters believe it would be impossible, once the scheme is well under way, for the two governments simply to stand aside if the project ran into serious trouble.

Moreover, sums to be raised are not massive by comparison with the cost of developing North Sea oilfields, and these are financed by the banks without state financial guarantees. Certainly an impressive array of banks and financial institutions have lined up to support the two leading groups bidding for a licence to build a privately financed fixed link.

Detailed financial negotiations cannot begin until after the two governments announce their decision in January. It would still be possible for the governments to choose a scheme only to find that the banks and institutions have de-

cided, after all, not to support the venture.

So what of the four schemes that have been submitted? The two favourites are still thought to be Channel Tunnel Group and EuroRoute.

Channel Expressway has gained a lot of ground in recent weeks. EuroRoute proposes a road and rail scheme involving an ambitious combination of road bridges linked to artificial islands connected by a 21-km tube road tunnel. A separate tunnel-only rail link is also proposed.

Channel Tunnel Group's advantage is that its scheme is cheaper than that of its principal rival—about £5bn after allowing for interest charges, inflation and provisions for cost overrun compared with more than £9bn for EuroRoute's scheme.

The technology of a bored tunnel—every independent in-

quiry mounted for government since 1956 has recommended a bored rail tunnel as the best option—is regarded as less risky than EuroRoute's bridges, tunnel and islands.

The rail tunnel's disadvantage is that motorists will not be able to drive across. Cars and lorries will be ferried on rail shuttles and Mrs Thatcher has expressed fears that a rail-only option could leave the government hostage to hostile rail unions.

EuroRoute's road and rail scheme is more flexible and therefore might be preferred by the British Government if it believed the promoters could attract the necessary private finance.

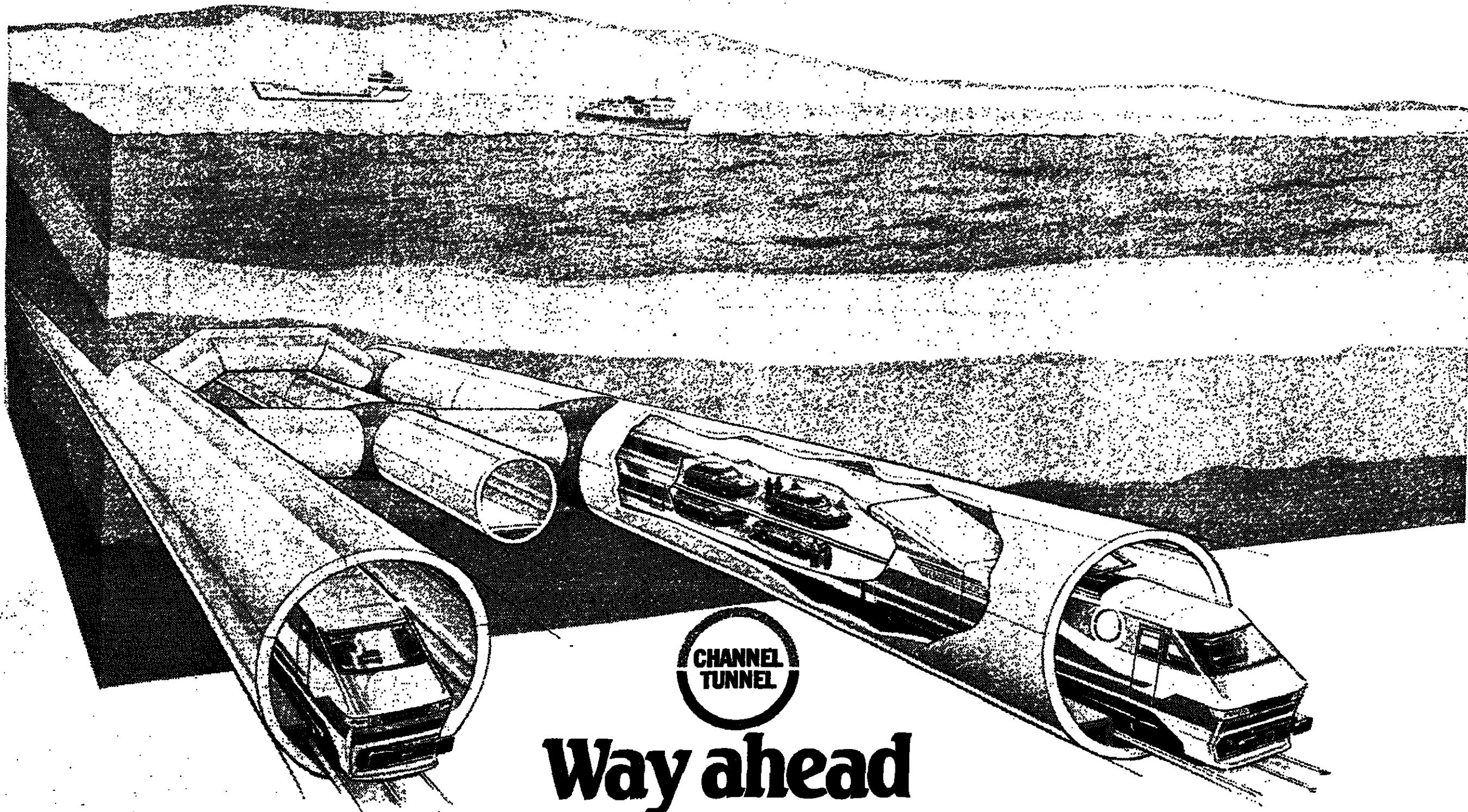
Channel Expressway, backed by Sea Containers, is proposing a twin-bore motorway tunnel with a separate rail tunnel. It had planned to run trains

through the same tunnel as the road but this idea was rejected by British Rail and SNCF, the French state-owned railway.

Sea Containers says its building costs would be much lower than those of the other groups although an all-party House of Commons transport committee this month questioned Expressway's costs. The committee was also concerned about the ability of ventilation systems to cope with heavy traffic in the road tunnel.

The other scheme submitted to the British and French governments is from Eurobridge which proposes a road bridge with 5km spans and a separate rail tunnel.

There is of course a fifth option. The governments could choose to have no fixed link at all, but this looks increasingly unlikely.



The drivers' choice

The Channel Tunnel offers car, truck and coach drivers the best way to cross to the Continent quickly, safely and in comfort.

There will be a modern terminal near Folkestone where vehicles pass through British and French Customs, then drive onto specially designed high-speed shuttles. There will be no

delay—shuttles will leave every few minutes. And with a journey time of half-an-hour, the Channel Tunnel will be the fastest route to the Continent.

Above all, it will enable Europe's drivers to cross a stormy and congested stretch of water in comfort and safety.

Drivers and passengers will be able to stay in their car and relax, or get out and stretch their legs

in the spacious, brightly lit shuttle. No hazards from gales, ice, fog, sleet or snow, or fuming in traffic jams. The Tunnel will be open 24 hours a day, 365 days a year.

It will be a relaxing break for the driver. The Channel Tunnel will also finally link the British and Continental rail networks for through passengers and freight services.

The Channel Tunnel Group Limited

The Channel Project 2

Plans to join Britain and France have been proposed for 180 years

Visionaries' challenge to history

IF ALL THE Channel Tunnel studies of the past 180 years were heaped together they might fill as much space as the chalk that would be excavated from any tunnel built between England and France.

Since the days of Napoleon, interminable plans, counter-plans and objections have been churned out by its advocates and its opponents.

The debate between them, sometimes stormy, sometimes subdued, has taken place against the shifting backdrop of two centuries of European and world history, and the growth of modern transport from the age of the horse to the conquest of space.

Although it was consistently opposed by the ports and shipping interests which have most to lose, there always seemed to be an ultimate consensus, on both sides of the Channel, supporting the economics of a link. The biggest clashes were over its implications for Britain's security, particularly in the latter half of the 19th Century and the first 50 years of the 20th.

The scale of the project fired the determination of Victorian railway engineers that it could and should be built. They saw a Channel tunnel as the ultimate challenge to an age which had tunnelled through the Alps and dug the Suez Canal.

The British and French railway owners were only too ready to commission geological studies of the sea bed, to launch rival public companies, and lobby the Governments of the day. Yet although the British were pre-eminent as railway builders, John Bull always shrank from the arms of la Belle France.

Many of the expectations aroused by the scheme now seem either trivial or exaggerated—from Queen Victoria's enthusiasm for a way of crossing the Channel without being seasick to the visionary excitement of John Bright at the removal of barriers between nations.

Such sentiments, like many of the objections, were real enough at the time. Yet the central idea of the crossing, as testified by a comment in the Financial News of February 14 1891, has outlived all these changes.

Ingenuous minds

The paper, which later merged with the Financial Times, said in an article headlined "Tunnel, Bridge or Tube?".

"That some system of inter-communication dispensing with the necessity for shipment or transshipment will in the long run, be established no one can reasonably doubt."

The question is thus one rather of method than of principle, and it is not to be wondered at, therefore, that ingenious minds have for long past been working on the details. No great engineering or financial difficulties stand in the way.... The opposition of the British Government is the one insuperable obstacle.

This comment applies not only to the first 90 years of the Channel Tunnel idea but to its subsequent history as recorded in the archives of the British



Punch cartoon of the 19th century which reveals British fears of an invasion by France if a tunnel were built.

Institute of Mechanical Engineers, in company files and elsewhere.

The first proposal for a tunnel was presented to Napoleon Bonaparte in 1802 by a French engineer called Mathieu. The tunnel, to be used for carrying mails, would have consisted of two ten-mile sections meeting in an artificial island on a mid-Channel sand-bank. Mathieu proposed a paved roadway, oil lamps and ventilation shafts sticking out of the water.

The first serious scheme, however, was that of Thomé de Gamond (1807-75), a French officer, doctor and engineer, who devoted his life to it.

He proposed it to Emperor Napoleon III in 1856, frequently revising it in later years in the light of new research. Brunel, Stephenson and Joseph Locke, the leading engineers of the day, pledged him their support and in 1859 an Anglo-French committee was formed to set up companies to seek a concession from the English and French Governments.

The first diplomatic exchange between the two countries occurred on April 15 1870, when the French ambassador in London sounded out the British Government. On July 26 1873, Britain gave its unqualified approval.

In 1874, an international commission set up by the two Governments drafted a protocol for ratification by both parliaments. On February 1, 1875, a French Channel tunnel company was formed. It was to spend some 2m francs over the next 30 years, and sank shafts on the French coast and com-

pleted 2,000 yards of tunnel. Companies were also formed on the English side by rival railway companies, eager to have access to the tunnel. In 1874, one of them sank a shaft and began tunnelling at St Margaret at Cliffe, Kent; another began digging at Abbot's Cliff between Dover and Folkestone.

Towards the end of 1882, at the foot of Shakespeare's Cliff, Dover, there was a gallery 1,700 yards under the sea, in which the entrepreneurs staged lavish parties to impress businessmen and politicians.

But suddenly the mood changed. Although French enthusiasm was rarely to waver, the benign attitude of the British Government was swept aside by a wave of fear that the tunnel could become a deadly high road for invasion, cancelling out the power of the Royal Navy. These fears helped to kill two Bills presented in Parliament at the beginning of 1883 seeking powers to build the tunnel and were to influence successive British Governments for the next half century.

It was as a result of such persistent fears that enthusiasts began increasingly to look at solutions other than a conventional tunnel.

Since the chief objection to a tunnel was that it could not be easily destroyed in an emergency, the alternatives consisted of bridges, or combinations of bridges and tunnel, of tunnels in pre-fabricated steel tubes laid on top of the seabed, and even of a partly submerged viaduct.

Their common denominator was that they could be rapidly put out of action from the surface should the need arise.

The Financial News article, quoted above, was prompted by plan by Sir Edward Reed, Member of Parliament for Cardiff, for two separate train-tubes, resting on caissons on the seabed, from Dover to Calais. But even this exposed layout did not assuage the fears of the military and Reed had to pull out before a second reading of a Parliamentary Bill to authorise its implementation.

More than a decade later, in 1907, the invasion argument put paid to a major scheme mooted by the Channel Tunnel Company, under the chairmanship first of Sir Edward Watkin and then of Baron Emile d'Erlanger. The Government opposed the scheme for a twin-bore tunnel—the advice of the Committee for Imperial Defence, even though the tunnel protagonists had changed their tactics by claiming that a tunnel would be a positive military asset to Britain in case of war.

By 1916 such views appeared to be totally vindicated by the plight of the British and French armies on the Western Front and the need to reinforce them and evacuate the wounded. A French Government Minister, in October 1916, said: "It is needless at this time of day to offer proofs of the great advantages our two nations would draw from a tunnel under the Channel."

The war over, the Tunnel lobby was convinced that its day had finally dawned and that the objections of the British military were gone forever. It was sorely mistaken. When the issue was referred to the Committee for Imperial Defence in 1924, it handed down the same judgment as it had in the years before the war.

There was to be one more campaign before the rise of Hitler and the Second World

War. In the midst of the Great Depression, the Conservative Prime Minister Stanley Baldwin set up a commission to look into the economics of the scheme. It concluded that a tunnel would be of economic advantage to the country, that the work should begin with a pilot tunnel and it should be financed purely by the private sector.

But once more defence objections prevailed. In 1930, with Baldwin now replaced by Ramsay MacDonald, a Cabinet statement said that "so long as the ocean remains our friend, do not let us deliberately destroy its power to help us.... There is no justification for a reversal of the policy pursued by successive Governments for nearly 50 years."

When a motion supporting the tunnel was put to the House of Commons it was defeated on a free vote—by only seven votes.

It was to take World War Two, the final supremacy of air power, and the advent of nuclear weapons of mass destruction to take the tunnel issue out of the hands of the generals and back into those of politicians, of engineers and entrepreneurs.

In July 1946 Prime Ministers Harold Wilson and Georges Pompidou issued a resounding declaration that "the two Governments have now taken a decision that the tunnel should be built". In 1973, the Government of Edward Heath said it had decided to "commend this historic project to Parliament and the country".

Although the link could now be considered vulnerable to terrorists, the delays of the next decade stemmed not from the security bogey but from the sheer difficulty of raising the money.

Maurice Samuelson



STEWART (on night-Channel boat): "If they bring in this 'ere tunnel, my job's gone." MR PUNCH: "That's the only sound objection I've heard yet."

Different political priorities become a factor

Lobbyists make their final push

"WHEN I return to metropolitan London from Ramsgate I see the promoters' glossy PR men in their bluish sun-coloured suits, driving their BMWs to and from the Ritz taking Members of Parliament out to expensive account lunches twice the average weekly wage of a Ramsgate worker, I get angry."

"Those sort of people do not understand what the destruction of a small community's principal employer and central industry will mean in terms of economic and human misery and despair."

These words in the Commons on December 9 by Mr Jonathan Aitken, Conservative MP for Thanet South and a critic of the approach of the Government and the promoters, sum up some of the delicate political issues involved with the Channel fixed link.

The activities of the lobbyists on behalf of the rival promoters have themselves become a political factor. Lobbying of politicians, both backbenchers and ministers, has been on a large scale, reflecting the size of the project.

Their efforts, brought into the centre of political controversy by BBC 2's Newnight programme on the night of the Commons debate, have involved meetings with MPs of all parties from throughout the country as well as discreet private conversations with civil servants and ministers.

All the arts of public relations have been deployed as well as more obvious propaganda weapons. Stands were set up at the main party conferences by two of the leading promoters, in one case featuring a working model where

lights could be operated by pressing a button. Most controversial has been the employment of MPs to work, directly or indirectly, on behalf of the various promoters. The Newnight programme noted, for instance, the activities of Mr Den Dover, Conservative MP for Chorley, who is parliamentary consultant to George Wimpey, a member of the Channel Tunnel Group consortium, and who receives a fee of £8,500 a year. He is also a member of the Transport Select Committee which recently reported on the project.

Mr Dover said he watched out for developments in Parliament which would affect his client and had arranged meetings to brief ministers and parliamentary private secretaries.

These disclosures have provoked considerable comment in the Commons. A number of Labour MPs have alleged that these payments to members were "bordering on corruption." Mr David Winnick, a Labour member who has been arguing for a tightening of the register of members' interests, said there was "the utmost pressure" on MPs by companies involved in the Channel project and payments were being made to MPs.

This raises a number of ethical and political questions. The current convention is that MPs declare any financial and other business interest but there has been controversy about whether the register provides sufficient detail.

A problem is that some MPs merely list in the register the lobbyists or public relations firms for which they are consultants or directors and do not

name the clients of these bodies for whom they act.

The critics argue that outside bodies are therefore able to buy privileged access to the facilities at Westminster which go beyond the traditional rights of MPs to represent the views of outside interests either in their constituency or trade union.

An equally pertinent question is whether the lobbying activity makes any difference at all, beyond informing MPs of what the various projects entail.

Str Nigel Brookes of Euro-Route indicated in his interview with Newnight that lobbying was helpful last year in creating the interest and momentum which led to the British-French decision to invite bids for a fixed link. However, he doubted whether it was any use lobbying now for a particular scheme.

Indeed, it is arguable that such activities — notably the briefing of the Sunday papers by one promoter — have been so blatant as to be counter-productive. Mr Nicholas Ridley, the Transport Secretary, and his Cabinet colleagues are not likely to be influenced by such pressure or, indeed, by the recommendations of the Transport Select Committee.

Sir Nigel and Sir Nicholas Henderson of the Channel Tunnel Group have said that they have been in touch with a number of ministers informally but that is very different from some of the crude lobbying and use of MPs on retainers which have been the subject of complaints.

The real question is not so much whether MPs are being influenced to favour one scheme or another as whether MPs themselves have any influence

at all. The Commons debate on December 9 was marked by a sense of futility.

The Prime Minister's enthusiasm for the project is clear and well known. Hence everyone who spoke believed that it would go ahead. There was also surprisingly little argument in favour of one scheme or another.

The debate was dominated by the doubts of the Kent MPs about the impact of any Channel fixed link on the economic of the coastal towns, especially the ferry ports, as well as environmental considerations.

Some pressed for increased infrastructure spending while Mr Peter Rees, Conservative MP for Dover and Deal and former Chief Secretary to the Treasury, raised the question of whether the town might be made an enterprise zone or a free port. These members were also worried about the speed with which the decision was being taken.

The Labour Party has taken a wait-and-see position, arguing that there is insufficient information available to make a judgement, hence there should be a full public inquiry. The Government has argued that this would involve delays which might kill the scheme. Labour's position partly reflects the divisions within its own ranks, with National Union of Railwaymen favouring a fixed rail link and the National Union of Seamen against the project, while a number of Scottish and north-western MPs are critical because they believe money and activity will be diverted from their regions. But most Labour, as well as Tory, MPs now favour a fixed link.

Peter Riddell



Tunnel works on the English coast in 1882

Big challenge for the financial sector

WHICHEVER scheme is finally chosen by the British and French governments to cross the strip of water that separates them, the financial markets of London and Paris will be asked to fund an infrastructure project more ambitious — and expensive — than any in recent history.

The determination of both governments that the private sector should bear the full cost of the project has presented the banks and institutions of both capitals with a most unusual challenge.

The sponsors of the rival schemes have faced, in their financial preparations, at least three common problems. The first is the sheer size of the financial commitments required.

In current prices, the schemes range between roughly \$2bn and \$4bn. While the utility characteristics of the project mean that, once a fixed link is in place, debt servicing costs can be met with some predictability from cash flow, the construction stage requires a very substantial injection of venture capital.

The banking system is familiar with large-scale infrastructure projects from, for example, the development of the North Sea, but the capital markets of Europe have never before been asked to provide risk capital on such a scale.

Second, the promoters of each scheme have been faced with the problem of securing financial support for a project which has not yet been approved. Neither prospective shareholders nor potential lenders have been keen to make commitments to a scheme authorised by government, but without indications of financial support the rival sponsors are unlikely to make much impression on the vetting ministries.

For institutional shareholders and most lending banks, this has been an insuperable problem. Little is lost, after all, by making provisional commitments to almost everyone at this stage. But the lead bankers and advisers have found it less easy to hedge their bets.

Finally, the sponsors have been required to strike a balance, in funding terms, between financial markets of different capacities. Whereas London provides an equity market which, as proved by British Telecom, has the capacity to provide very substantial quantities of capital at a stroke, the Paris bourse has never been tested by a new issue of the size demanded by the Channel project.

Conversely, French banks may be ready to provide the requisite loan finance—owned as they are for the most part by the French Government—than their counterparts across the water. But the logical solution—to weight the equity towards Paris—is not so straightforward, since it implicitly rewards British banks' more highly for their riskier commitment.

Both Euroroute and Channel Tunnel Group, which arguably have the most developed financial proposals, expect to raise a significant proportion of the necessary finance outside the UK and France. CTG, for example, has commissioned Nomura Securities, one of Japan's biggest financial institutions, to handle a share sale in Tokyo, while Salomon Brothers, the leading Wall Street investment bank, will take care of the US financing.

Expressway, which will look to the international debt market to refinance some of the initial bank debt, has a comparably high-powered consortium signed up.

But the main burden will inevitably fall on the capital markets of Paris and, in particular, London. Stockbrokers Phillips and Drew have come up with the intriguing proposal that, as the private sector is providing the capital, the private sector should be in a position to select the scheme.

Alternatively, the Government might approve several consortia and then invite them to bid for the sole concession.

Yet, while politicians will make the final decision, they cannot afford to ignore the views of prospective financiers. The official nightmare is a half-finished link to which the private sector will commit no more capital and which the governments will be obliged to complete.

In the weeks leading up to the submission of plans, City institutions were lobbied intensively by the leading contenders. CTG came out ahead of Euroroute on points, not least because of the more modest funding requirement.

Since then, in the early years at least, not much to choose between the two in terms of return. CTG appeared to provide both a higher return on investment and a more attractive risk-reward ratio. Phillips and Drew calculates, however, that the highest equity return should be achieved by a relatively late entrant, Channel Expressway.

On P and D's more pessimistic calculation, Expressway emerges with a nominal internal rate of return of 15.5 per cent, ahead of CTG on 14.5 per cent and Euroroute with 11 per cent. The more optimistic calculation has Expressway returning 22 per cent, CTG 21 per cent and Euroroute 18.2 per cent.

John Makinson

ASSESSMENT PROCESS

IN BRITAIN at least 50 senior civil servants will be directly involved in assessing the plans submitted by the four groups. They will be assisted by a number of private sector consultants such as J. Henry Schroder Wagg and have been appointed as financial advisers on the project.

A similar team of French officials has been established and the two groups will combine their findings in a joint report now being delivered to ministers.

The two governments expect to announce by the end of next month which, if any, of the schemes will go ahead.

The plan is to sign a treaty between the two countries by March with a Bill to be introduced in to the British Parliament by the spring.

This will be a hybrid Bill which allows the development to make their complaints to special parliamentary committees in the House of Lords and in the Commons. In addition the Bill will go through the normal legislative procedures.

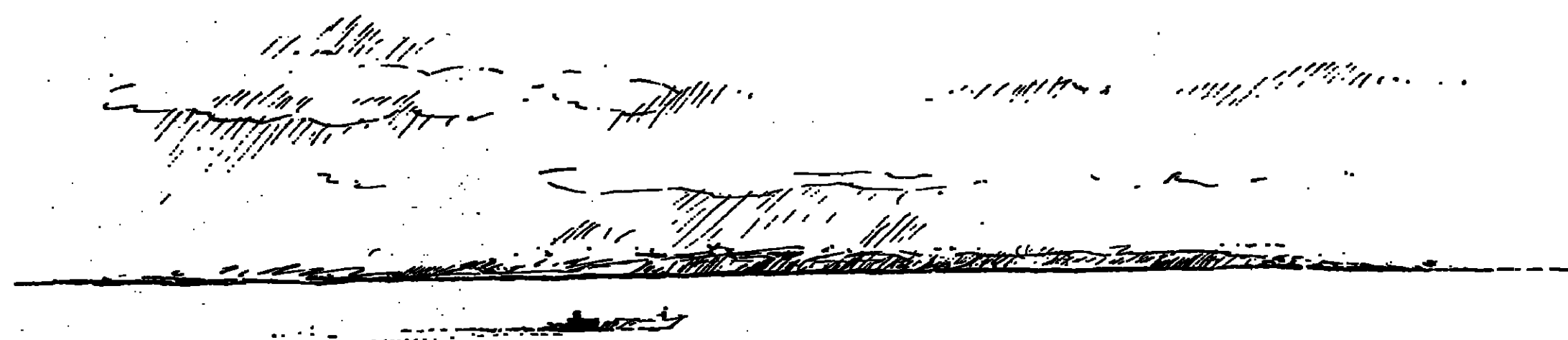
There will be no public inquiry, the Government regarding the special machinery of the hybrid Bills as sufficient to consider complaints. It is expected that the Bill's passage will take about 12 months which would allow construction to start in summer 1987.

In France a Declaration d'Utilité Publique will have to be passed which will require a public inquiry. However, the French system of public inquiries is different to that in the UK. In France more emphasis is placed on assessing a scheme's impact and the grounds for compensation than on trying to decide whether a scheme should go ahead or not.

J. Henry Schroder Wagg & Co. Limited

is pleased to be acting as the financial adviser to the Department of Transport in connection with the Channel Fixed Link.

Schroders



"WHY DIDN'T YOU BUILD A ROAD ACROSS AS WELL?"

EUROROUTE GIVES US THE CHANCE TO BUILD A FIXED LINK ACROSS THE CHANNEL THAT INCORPORATES BOTH A MOTORWAY AND A RAILWAY.

IF WE FAIL TO SEIZE THIS OPPORTUNITY OUR CHILDREN AND OUR GRANDCHILDREN WILL, QUITE REASONABLY, QUESTION OUR JUDGEMENT.

THEY'LL HAVE HEARD THAT RESEARCH CLEARLY SHOWED THE CONTINUING GROWTH OF CROSS-CHANNEL TRAFFIC AND PEOPLE'S DESIRE FOR CHOICE-INCLUDING, ABOVE ALL, THE FREEDOM TO DRIVE ACROSS.

THEY'LL KNOW WE HAD THE TECHNOLOGY, TRIED AND TESTED IN SUCH SEVERE CONDITIONS AS THE NORTH SEA.

THEY'LL RECALL HOW WE HAD THE CHANCE, THROUGH

PREFABRICATED CONSTRUCTION, TO PROVIDE MANY YEARS WORK FOR 30,000 PEOPLE PARTICULARLY IN SCOTLAND, NORTH-EAST ENGLAND AND NORTHERN IRELAND.

AND THEY'LL KNOW, TOO, THAT THERE WERE BANKS AND INSTITUTIONS IN BRITAIN, FRANCE AND IN THE INTERNATIONAL MARKETS PREPARED TO FINANCE THE PROJECT WITHOUT A PENNY FROM THE TAXPAYER.

SO, IF WE ARE TO SATISFY THE NEEDS OF FUTURE GENERATIONS AS WELL AS OF OUR OWN, WE MUST BUILD BOTH A MOTORWAY AND A RAILWAY ACROSS THE CHANNEL.

EUROROUTE IS THE ONLY PRACTICAL WAY OF DOING SO.

EURO ROUTE

The best solution

The Channel Project 4

A party atmosphere prevails in Paris

The French display their strong support

MR JEAN AUROUX, the French Transport Minister, held a big party on October 31 in the gilded salons of his ministry on the Paris Left Bank to mark the official deadline for the submission of Channel fixed link projects.

The main competitors had come with colourful models of their rival schemes. Press and television turned out en masse as did all the top officials of the competing projects. There was also plenty of whisky and the inevitable petits fours served at all formal occasions in France.

At exactly the same time, the rival projects were also being submitted in London. But the contrast could not have been greater. In London, the whole affair was played down and there was none of the party atmosphere of Paris.

This contrast is an eloquent reflection of the differences between Paris and London in their respective approach to the fixed link project, and it underlines the huge support it has had from the beginning in France.

There is no doubt that France has felt it has always been a far keener supporter of the fixed-link than Britain. Indeed, the French government has shown throughout the discussions with its UK counterpart considerable flexibility and willingness to compromise in an effort to ensure that the project goes ahead.

Paris would have been favourable to some element of state intervention in the financing of the venture but quickly dropped any idea of state financial participation in the face of the tough opposition of the British government against any state financing or financial guarantees. Diplomats and government officials in Paris say that the Socialist government has fully accepted the private financing principle of the project.

"This is no longer an issue and hasn't been one for a long time," says one French official closely involved in the fixed-link discussions. "The French Government now believes that financing will be readily available from private sources."

Technical traffic considerations are likely to pose greater problems at this stage.

Having accepted the idea that the fixed-link would be a private sector project, the French Government has always made clear that it wanted to see a rail element in whatever link was finally chosen. Of all the issues involved this is perhaps the most important from the French point of view.

France sees the fixed-link as a major opportunity to develop its high-speed TGV train network (Train à Grande Vitesse). Although the TGV has turned into a spectacular technical success and the Paris-Lyon-Marseille TGV link has made a big dent in domestic flight revenues, the French Government and railways have been looking for new opportunities to consolidate the concept.

Lobbying
A TGV route is now being built between Paris and the west of the country and the Government is lobbying for the construction of new eastern service linking Paris and Brussels and going on to Cologne in West Germany.

The Channel fixed-link would not only provide the opportunity for a high-speed train service eventually to London but provide a further argument for construction of the Brussels and Cologne line since it could include a branch going to Calais.

The French insistence on the rail content of any fixed-link project has been one of the key factors which the various promoters of the rival Channel projects have had to bear in mind. It has been no secret that the SNCF, the French state railways, has from the beginning preferred the twin-bore rail tunnel proposal of the Channel Tunnel Group/France Manche consortium because of its exclusively "rail character".

EuroRoute, the bridge and tunnel solution and the main rival of the Channel Tunnel project, has mounted a major campaign to persuade the SNCF and British Rail of the merits of its proposal which now includes a separate rail tunnel. EuroRoute argues this

would give the railways an exclusive link of their own.

Apart from the railway issue, the French are not expected to differ from the British on the ultimate choice of project. French officials involved in the current review of rival projects said that they had been impressed by the "good and constructive spirit" of discussions between the two assessment panels on either side of the Channel.

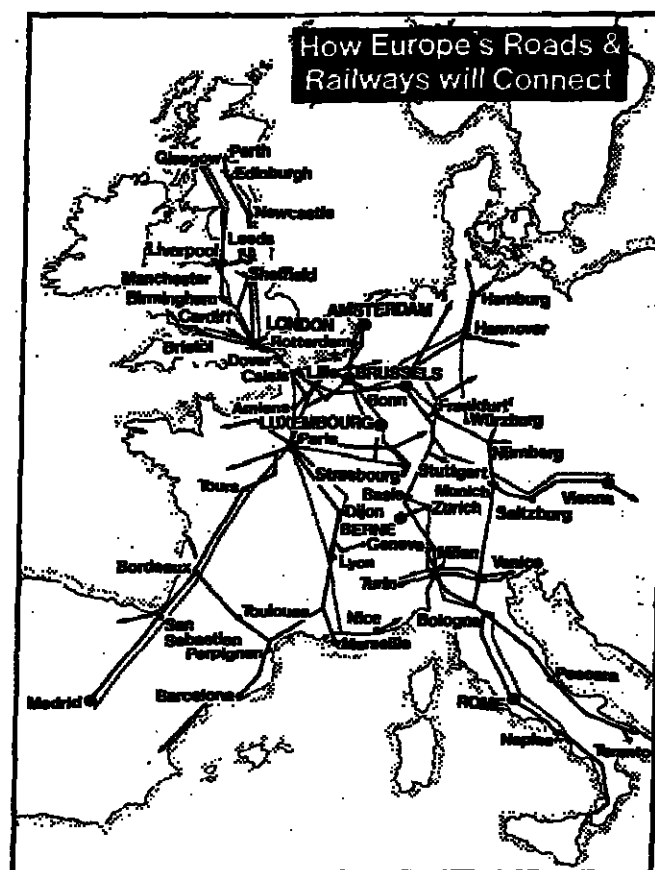
In any event, France is anxious to avoid letting any obstacles come in the way of the project. The French government and the right-wing opposition parties concur in thinking that the timing is now favourable for the project to go ahead and unless a decision is taken rapidly, it could be buried again for decades.

Although France will have a general election next March, which the right-wing opposition is widely expected to win, the Channel link is not a political issue. There is an overwhelming consensus in France that it is a positive project which will not only represent one of history's greatest civil engineering feats and show up the best in European civil engineering capabilities, but it will also help consolidate the concept of European union.

"There is really no argument at the political level over the prospect in France as opposed to the UK where there are big differences," a British official remarks. The only opposition to the fixed-link has come from the town of Calais. But even there, Calais has been a lone voice in its own region of the Nord-Pas de Calais which itself is also a big supporter of the fixed-link.

For the French north, the project is seen as providing considerable economic benefits and new job opportunities. Unlike the British side of the Channel, the French northern regions are depressed and contrast sharply with, say, the county of Kent.

"Our regions are our dear ones," says one French official. "The equivalent of Britain's Cotswolds or Riviera," says one Channel project promoter. The economic gains which the fixed-link could generate have



AND TO KEEP EVERYONE HAPPY THE NEW ROUND POINT JOB WILL BE DONE BY THE SEAMEN UNION...

already been exploited by the Socialist government which sees the Channel project as a possible way of gaining badly needed extra votes in the north. In October the Government announced that it was setting up a working party to review the advantages the link could bring to the north as part of a new Ffr 3bn (\$385m) job and economic support package for the depressed industrial region around Lille and the Pas de Calais.

But beyond purely electoral political calculations, there is a genuine sentiment of support from both left and right for the fixed link. So much so that French officials often express worries that the British side is seen as cold and unenthusiastic. As a result, the Mitterrand administration has repeatedly

Significant implications for regional policy

A magnet for industry and commerce

THE FIXED LINK, if it is built, will have a substantial impact on jobs and the local economies at either end of the crossing—but what will it mean for other areas of both countries?

The construction of a fixed link has significant implications for regional policy. Industry and commerce will want to establish bases close to the portals of what will be the single most important trade route between Britain and the Continent.

It will act as a magnet for capital, job opportunities and new development in the same way that Heathrow Airport has been a magnet for companies which have established along the M4 motorway west of London.

This creates a dilemma for the British government. Its end of a fixed link will be in the depressed southern part of the country in an area which, generally, does not need, nor want, the kind of stimulus the development is bound to generate.

There must also be concern at the prospect of more employment opportunities fleeing to the south when regional policy is concentrated on bringing those self same jobs to depressed regions such as north-east England and Merseyside.

In this respect the French have the better end of it. Geography determines that the French end of a fixed link will be in the northern part of the country, an already industrialised region with high unemployment which has (the ferry ports apart) enthusiastically welcomed plans to build a fixed link.

Mr Pierre Mauroy, mayor of Lille and a former Prime Minister, describes the venture as one of the greatest projects in history which could turn the Nord-Pas de Calais region into the economic hub of Europe with spokes radiating out to Paris, Brussels, Cologne and across the Channel to London.

At the centre of these dreams are plans to extend France's high-speed rail network—based on the TGV train (Train à Grande Vitesse) which currently runs between Lyons and Paris—from Paris to Brussels and possibly on to Cologne. The prospect of running a spur to a fixed link to allow a modified TGV to travel to London, would make these plans a virtual certainty.

The French are looking at other ways to stimulate the

region's economy. It recently announced plans to establish a working party to review the advantages a fixed link could bring the north as part of Ffr 3bn (\$385m) job and economic support package for the depressed industrial region around Lille and the Pas de Calais.

This could create additional problems for British regional policy. If investment, which could come to either end of the link, were to be concentrated on the French side because of incentives being offered, the British might have to consider offering similar inducements.

Much anger

The British end of any bridge or tunnel will be in Kent, the "Garden of England," and with a strong environmental and farming lobby which is totally opposed to the development. There is much anger that there will be no public inquiry and there are complaints that the project is being rushed through against the wishes of local people.

Support for the link tends to be muted. Kent county councillors, for example, have voted to support the development but in a rather back-handed way: not because they think it should happen but because they believe it will be built anyway, no matter what they say. They have also warned of job losses as companies which supply the cross-Channel ferry trade.

Dover, busiest of all the ferry ports, has warned that thousands in the town will be thrown out of work if a fixed link is built.

It fears that the spate of development likely to follow construction of a fixed link will bypass Dover—which will be to the east of the crossing while most of those using the link will approach from the west along the M20 motorway.

The pressures for new development will be strong. The construction of the M25 orbital motorway around London, which is almost completed, has already opened up this part of the national motorway network to construction of a fixed link.

Construction of a fixed link would provide an ever bigger incentive for companies trading heavily with the Continent to establish operations close to the crossing. A lot of people living in the declining coalmines, struggling steel mills and tired textile companies of northern France are praying that a fixed link project does go ahead.

But while individual centres may have problems, such as the Medway Towns, the region as a whole is generally regarded as reasonably prosperous. If the link does create new employment opportunities it would be better for the Government if these would come elsewhere like North-East England.

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Woodrow and Wimpey have already established a joint property company to take advantage of development opportunities in Kent which should arise following the construction of a fixed link.

The five are also members of the Channel Tunnel Group, which proposes to construct a twin-bore rail tunnel under the Channel.

Councillors at Ashford in mid-Kent have voted to support the Channel Tunnel Group's plans. If the project goes ahead British Rail intends to redevelop and expand the town's rail station as a major interchange for passengers travelling to France.

There are also plans to site a heavy goods terminal on the outskirts of Ashford which would carry out customs formalities and other frontier formalities for lorries carrying freight to and from the Continent.

The Medway towns of Rochester, Chatham and Gillingham in north Kent may also benefit. They are not directly on the main route to the south east coast where the link will be built—but they are industrial areas with high unemployment and local authorities which are anxious to encourage new development—particularly since the closure of Chatham dockyard.

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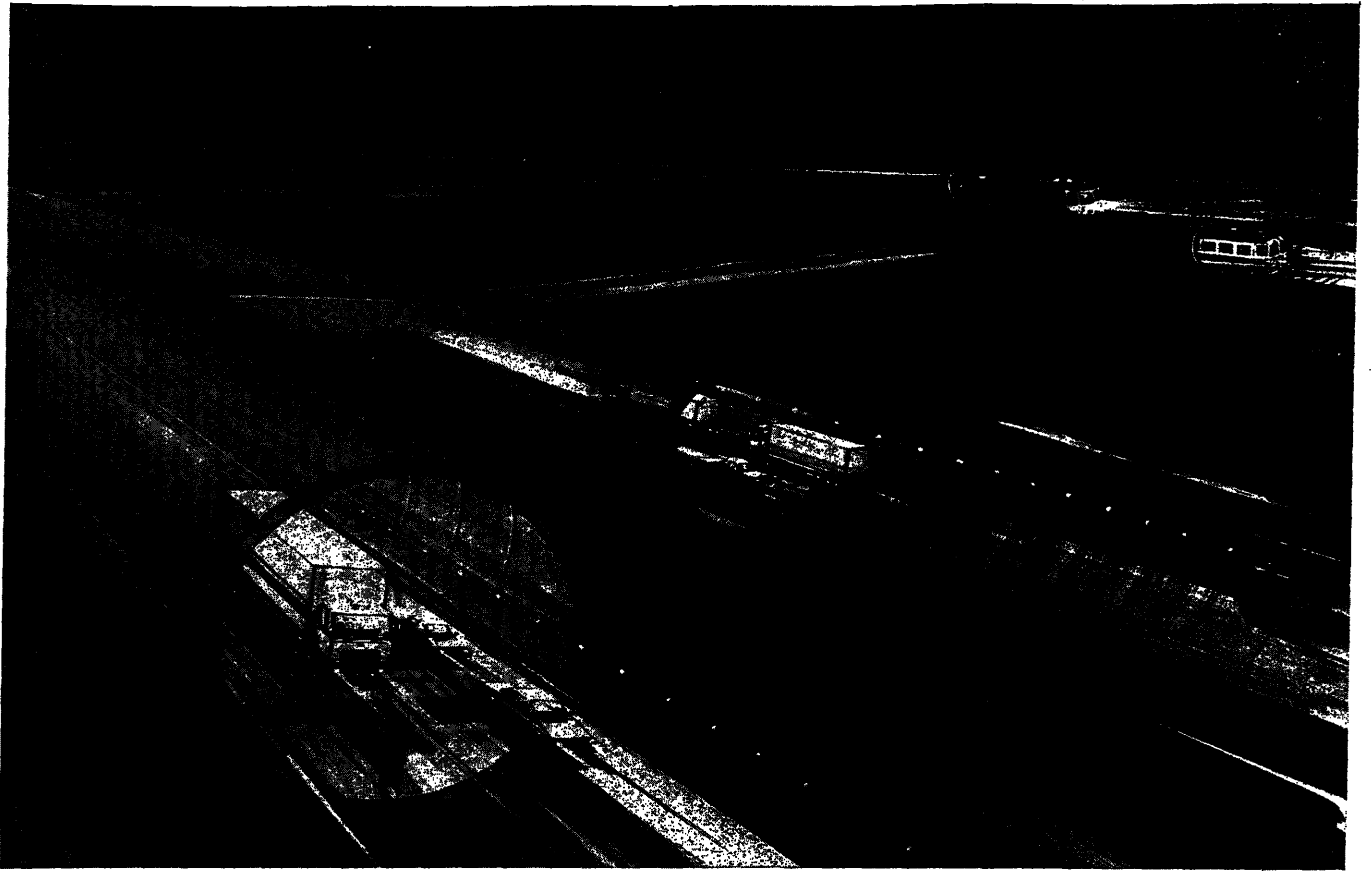
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CHANNEL EXPRESSWAY



- The most recent poll shows that almost 50% of people who want a fixed-link want Channel Expressway's drive through road and rail tunnels. MORI
- Channel Expressway is a drive through tunnel for its entire length; this means that it can't be closed by bad weather, nor will users suffer delays from loading their vehicles onto and off train shuttles, or have to wait for the next train departure.
- Channel Expressway is also a rail tunnel – London to Paris in 3¼ hours by high speed train. Separate tunnels will be provided for the railways' exclusive use.
- Channel Expressway is the cheapest proposal so it will have the lowest tolls for users. Tolls will be reduced as the tunnel debt is paid off. The lower the debt, the quicker the reduction in tolls.
- The construction and operation of Channel Expressway will provide an enormous challenge for British industry and create thousands of jobs. The 2,500 Sealink British Ferries staff now engaged in the short-sea Anglo-French ferry services will be offered employment in Channel Expressway's operations.
- 'Channel Expressway's environmental impact will be the least damaging of the four schemes – it would appear to offer the most convenient service to the user' KENT COUNCIL'S PLANNING OFFICER
- 'Channel Expressway has the double attraction of a drive through service and a relatively low cost' LEADING TRANSPORT ANALYST, PHILLIPS AND DREW
- Channel Expressway will have enough capacity for road and rail traffic for at least 50 years.

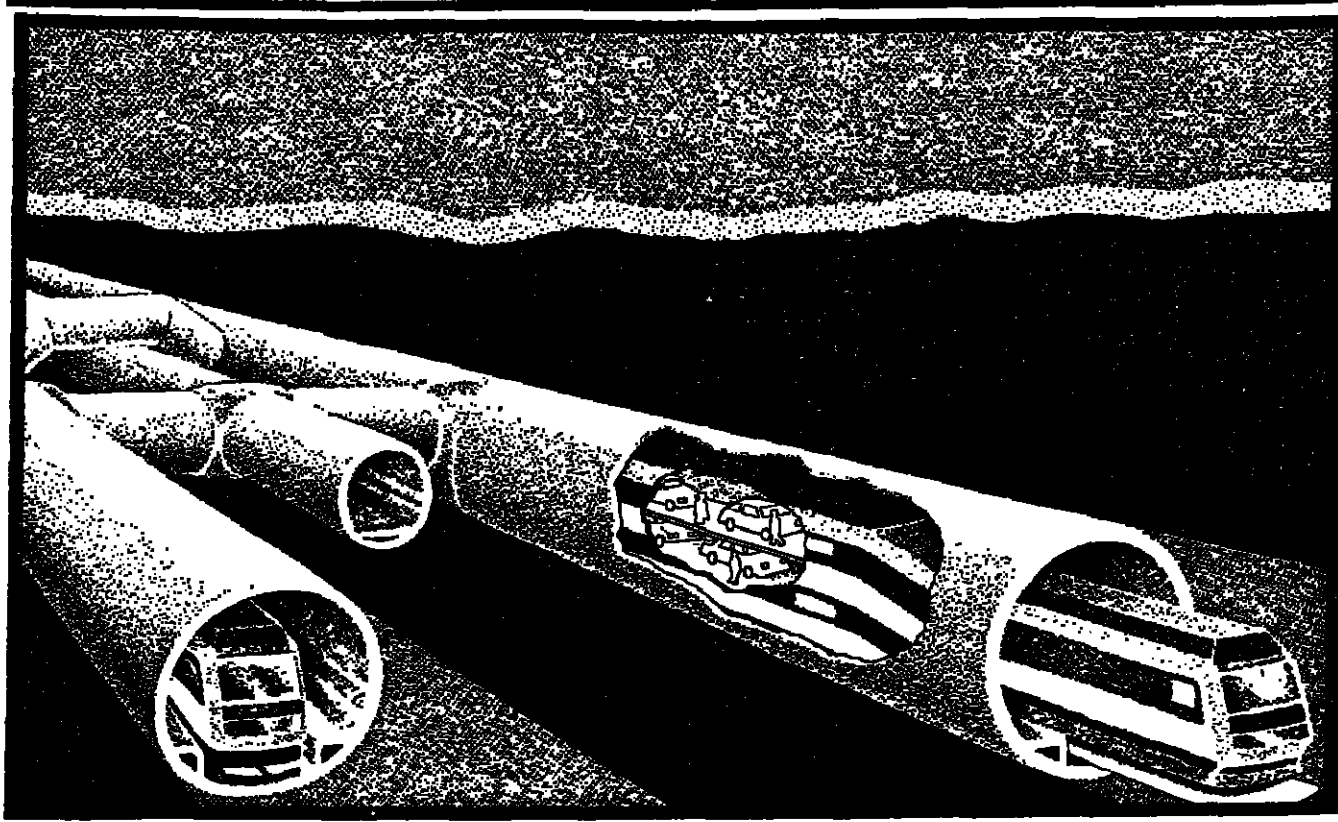
SEALINK BRITISH FERRIES IS THE ONLY TUNNEL
PROMOTER WITH EXPERIENCE OF CROSS-CHANNEL
PASSENGER AND FREIGHT TRAFFIC.

THE TUNNEL YOU WANT FROM THE CROSS-CHANNEL PROFESSIONALS



For further information contact Maureen Tomison, British Ferries Limited, Sea Containers House, London SE1 9PF. Telephone: 01-928 6969.

The Channel Project 6



Sir Nicholas Henderson. Impressive backing from banks and construction companies on both sides of the Channel



CHANNEL TUNNEL GROUP: £2.6bn scheme which will offer mainline rail service and a shuttle for motorists through twin tunnels

Strongly-backed proposal using tried techniques

CHANNEL TUNNEL GROUP's proposal to build a twin-bore rail tunnel under the sea is the bookmakers' favourite and generally regarded as the scheme to beat.

Channel Tunnel Group boasts an impressive list of Anglo-French sponsors and has probably done more than any group in winning the support of international bankers and investment institutions.

The advantages of its proposal are that the scheme is cheaper than at least two of its rivals, and the technology of boring tunnels—particularly through the materials and geological structures that exist for most of the way under the Channel—is generally regarded as safer than some of the more adventurous techniques and schemes which have been proposed.

The disadvantage is that the tunnel will not allow motorists to drive across: vehicles will be shuttled through on specially constructed privately-operated trains. There has also been some concern that the scheme will be unable to accommodate peak time shuttle demand and all the growth in mainline rail traffic forecast by SNCF, the French state-owned railway.

The promoters believe, however, that the tunnel will have sufficient capacity to cope with both shuttle and mainline demands and that its advantages of cost and simplicity of building outweigh the disadvantages

of not being able to offer the flexibility of a drive-across scheme.

They stress that every independent inquiry commissioned by government since the 1950s has recommended a bored tunnel as the best solution. This includes an independent inquiry by British and French banks which published its findings last year. Two of those banks, National Westminster and Midland, have subsequently joined the Channel Tunnel Group consortium.

Shuttle demand
Other British shareholders include construction companies: Balfour Beatty, Costain, Tarmac, Taylor Woodrow and Wimpey.

French shareholders also include an impressive list of construction companies and banks including: Banque Nationale de Paris, Credit Lyonnais, Bouygues, Dumez, Societe Anonyme d'Entreprises, Societe Generale d'Entreprises and Spie Batignolles.

The cost of the scheme has been estimated by the promoters at about £2.5bn at 1985 prices. This rises to more than £3bn after allowing for interest charges on development loans and provisions of £1bn to cover possible cost overruns.

More than 30 international banks have given provisional commitments to provide more than £4bn in development

loans. Commitment fees will be payable by the consortium to the banks as soon as (or if) this scheme is given the go-ahead from the British and French governments in January. The offers are conditional upon the group raising at least £850m in equity and satisfying the terms of a preliminary information memorandum which has been issued to potential investors.

Plans are already in hand to raise about £1bn in equity which institutions in London have said they would be prepared to underwrite in full.

The proposal, however, is to raise about £250m together in Japan and the US where Nomura and Salomon Bros have been appointed to handle the share sale. Britain and France are expected to raise about £325m each, leaving £100m to be raised in the rest of Europe. The consortium expects to seek a full listing on the London and Paris stock exchanges in mid-1987.

The banks which have provisionally committed development loans include more than a dozen Japanese banks providing more than £1.6bn. Amounts committed by individual banks include: £200m each from National Westminster, Credit Lyonnais, Banque Nationale de Paris, Banque Indosuez and Credit Agricole.

Commitments of £160m have been made by Arab Banking



Jean-Paul Parayre, president of France Manche, the French constituent of the Channel Tunnel Group

Corporation, Banca Commerciale Italiana, Bank of Tokyo, Commerzbank, Deutsche Bank, Industrial Bank of Japan, Sanwa Bank, Security Pacific, Tokai Bank and Union Bank of Switzerland.

Commitments of £120m have been made by Dai-ichi Kangyo Bank, Daiwa Bank, Fuji Bank, Mitsubishi Bank, Mitsui Bank

and Societe Generale de Banque. There have been commitments of £80m from Den Norske Creditbank, Dresdner Bank, Mitsubishi Trust and Banking Corporation, Saitama Bank and Taiyō Kobe Bank.

The Banque Internationale a Luxembourg has pledged £50m and Banque Internationale d'Afrique Occidentale and Union de Banque Arabes et Francaises have both pledged £40m.

If all goes well the consortium plans to complete the main tunnels by spring 1991. Fitting out is due to be finished in autumn 1992 when commissioning of the shuttle railway system will begin. With the tunnel due to be opened and operations start in spring 1993.

The plans call for twin rail tunnels, connected by a third central service tunnel. These will be bored at an average depth of 40 metres under the sea bed. Each of the main tunnels will be 7.5 metres in diameter and just under 50km in length, of which 37km will be under the sea, and will carry a single rail track in each direction.

The service tunnel which will provide ventilation will be linked to the main tunnels by galleries at 575 metre intervals. There will also be regular crossover points between the two main tunnels to permit routine maintenance

and to allow passengers to escape and emergencies to be dealt with should one tunnel become blocked.

The rail shuttles will be designed to handle up to 4,000 vehicles an hour travelling in each direction with trains at peak times leaving at three-minute intervals. The promoters expect, however, that initial demand will not average much more than 1,000 vehicles an hour in each direction.

Construction will be carried out by a joint venture of two groups of contractors with six tunnelling machines on the British side and six on the French. It will create more than 2,000 civil engineering jobs at each end of the tunnel during peak construction period.

The provisional estimate of tunnelling speed is between 400 metres and 500 metres per month on the French side and 1,000 metres a month in the better ground on the British side.

About 8m cubic metres of spoil are likely to be produced of which 4m cubic metres will be disposed of in the UK. Most of this will be used to level the site planned for a new rail terminal at the UK end of the tunnel and to reclaim land and stabilise sea cliffs under which the railway will run.

Two new terminals are planned: near Fretton, south west of Calais in North Eastern

France, and Cheriton, north west Folkestone in South East England.

Cars, lorries or coaches travelling to Britain or the Continent will load their vehicles on to the specially designed roll-off shuttles at the terminals.

There will be double-deck shuttles for private vehicles less than 6ft high. The shuttles will be air-conditioned and the consortium's brochure shows passengers travelling with their cars but with room to walk about, and refreshment dispensers and television screens displaying traffic information.

The terminals will also provide toll booths as well as one-stop customs and immigration facilities. Shops and other passenger services will also be provided on site as well as duty-free facilities, if these are permitted.

Duty-free shopping

Journal times between the terminals at Cheriton and Fretton are estimated at 30 minutes at a maximum speed of 160 kmh (100 mph) — or 45 minutes if lower speed limits of vehicles is taken into account and 1 hour 10 minutes if time is allowed for ticket purchase, customs, immigration and any duty-free shopping.

Erasing is difficult to determine with accuracy. The scheme

will not open for another eight years and nobody knows what the ferries will be charging then. However, the promoters are working on the basis that at 1985 prices fares may be about £18.00 per car passenger or £5.70 per coach passenger.

Interpreted between the shuttle trains will be mainline rail traffic. British Rail is planning a new terminal at Waterloo with Ashford station in mid-Kent expanded to become an interchange for passengers travelling to the Continent from other parts of Britain.

SNCF forecasts suggest that up to 10 mainline trains an hour in each direction could use the fixed link at peak times and this could create capacity problems for the Channel. If the scheme would not stand in the way of the Channel getting government approval.

For the French the carrot is being able eventually to operate their TGV high-speed train (Train a Grande Vitesse) from Paris to London. Even if the track between the English coast and London will not permit the high speeds achieved in France.

Andrew Taylor

EUROBRIDGE: A 12-lane motorway bridge and single-bore rail tunnel

Pitched to match traffic growth

EUROBRIDGE PLANS to make revolutionary use of established materials to build a record-breaking 12-lane motorway bridge across the Channel. If built the bridge's spans would be three times longer than anything attempted before.

Eurobridge has produced a string of consultants' reports, backed by leading engineers, to support its claims that the bridge can be built and will be safe.

However, the scheme has struggled to achieve credibility. A recent report by an all-party House of Commons transport committee, also backed by the advice of an eminent engineer, said that the technology to be used to build the bridge was not sufficiently proven for it to support the proposals.

The project has also suffered because of the lack of a clear corporate identity despite the active support of such companies like John Laing and Brown and Root (construction companies) and ICI Fibres, part of the ICI chemicals group.

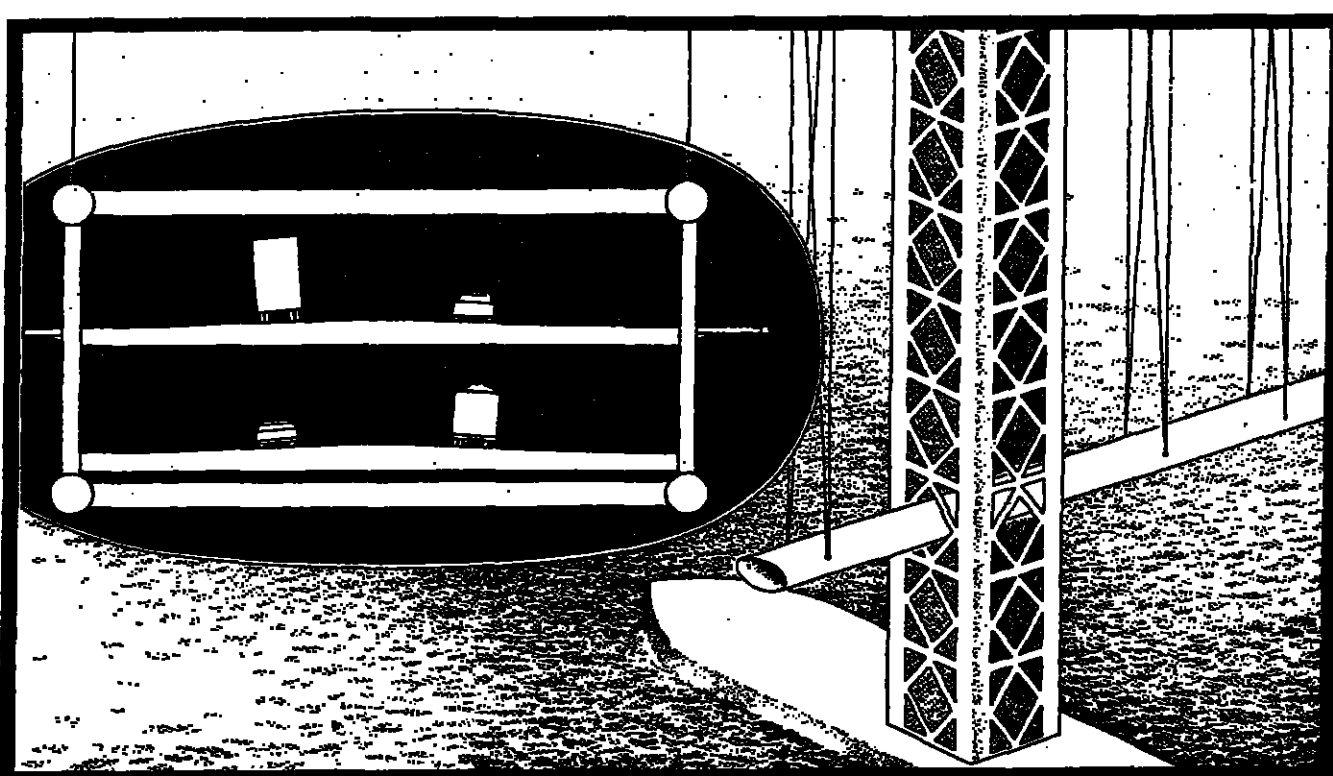
Attempts have been made to formalise arrangements but the image remains of a loose co-operative of like-minded people rather than a major corporate body with a clearly-defined financial structure commensurate with investing shareholders.

There are also grave reservations about Eurobridge's ability to raise the necessary private finance despite the group's confidence that the money will be available if its proposal is chosen.

Eurobridge says its strongest appeal is that it is the only road scheme which provides the capacity to cope with the increase in traffic likely to arise during the life of a concession which could run for up to 50 years. The crossing itself must be built to last 120 years, according to the British and French Governments.

"The two other road schemes provide for only two lanes of traffic in each direction, compared with our six lanes in each direction. Channel Tunnel Group's scheme does not even provide for a road crossing. Our rivals are providing 20th century solutions to what will be a 21st century problem," Eurobridge says.

Instead, Eurobridge proposes to build a seven-span suspension bridge. The bridge piers, six of them in the Channel and two onshore, would consist of two towers which will stand 400 metres above high water.



The spans between the bridge piers would be of about 4.5 km, three times the length of the longest suspension bridge at present open: the Rumber Bridge which has a 1.4 km span. Eurobridge says that the record-breaking spans are possible by using cables made of paraffin, a composite material developed by ICI and Dupont, which has more than six times the strength of steel for the same weight.

The 12-lane motorway—two decks of six lanes each—would be contained in an aluminium sheath on a steel frame. "By enclosing the roadways the bridge will be able to remain open in the most severe weather conditions," Eurobridge says.

There will be slip road road interchanges between the two levels of motorway. Each deck will have hard shoulders and raised walkways on each side of the road.

Eurobridge is also considering using estercete, a polyester-reinforced cement, which it says has been successfully tested by the UK Transport Department, to provide a road surface "approximately one-quarter of the thickness of traditional materials."

The roadway will be about 70 metres above sea level while most of the bridge piers in the Channel will either be located in shallower inshore shipping lanes or in the centre of the reservation between the two main shipping lanes.

Eurobridge says that because of the strategic placing of the bridge piers it will need to seek consent from the International Maritime Organisation for only one of the piers. Informal discussions have taken place with the IMO.

The bridge piers would be protected from collision by huge floating fenders which the consortium says would be capable of withstanding impact from a 250,000-ton vessel travelling at up to 17 knots.

The piers will also be equipped with "acoustic, laser and electronic locating and warning devices," says the group. High-speed launches would be kept at the piers to intercept vessels.

The height of the road above the water will allow the largest ships to pass easily underneath. Drivers, because the roadway will be enclosed, should suffer no psychological problems from being so high, the promoters say.

The foundations and towers for the bridge would be prefabricated on shore before being towed into position and assembled, incorporating techniques used in the development of North Sea oil and gas fields.

In addition, Eurobridge proposes to build a single-bore rail tunnel with a diameter of 6 metres.

Total capital cost of the road and rail crossings has been estimated by the promoters at £5.2bn at 1986 prices. After allowing for finance costs and inflation, the total sum required by the group rises to more than £6bn.

Eurobridge says: "Bank finance may be expected to account for the major proportion of the debt required in the construction phase, with the prospect of refinancing by additional equity and bonds towards the end of that phase."

It says that a number of banks have expressed "serious interest" in financing the project. However, there is no evidence of any wide-scale support for the venture either from the financial markets or from the two governments.

A. T.

A fifth option is to rely on improved sea crossings

Ferry companies' fear is unfair competition

THERE IS a fifth option available to the British and French governments, which is to reject all plans to build a fixed link and rely on an improved sea ferry service for Channel crossings.

The two governments were asked to consider seriously this option when the four fixed-link schemes were submitted at the end of October.

The promoter of the fifth option is Flexlink, a group of cross-Channel ferry operators who claim that the fixed link would be a loss heavily if a new crossing is constructed.

Flexlink says it is not afraid of fair competition from a fixed link. Improvements in port installations and ferry design mean that ferry prices could fall by 40 per cent over the next 10 years.

A fixed link saddled with large development loans would find it extremely difficult to compete on price, if competition is fair, the organisation says.

On journey times Flexlink says: "EuroRoute and Channel Tunnel Group, two of the main contenders to build the link, claim about a 30-minute crossing time for their proposals."

This compares with an average journey time for the existing Hovercraft crossing between Dover and Calais of about 35 minutes. This is broadly comparable with the times suggested by fixed link promoters yet Hovercraft's share of total traffic has remained relatively modest despite the fact Hovercraft operators have not charged a significant premium for their service."

It argues that speed of crossing is not the only factor to be considered. Many people enjoy the sea crossing on board a ferry and the amenities provided on board.

If the ferries believe they can compete with the fixed link on price and service why should they fear its construction?

Flexlink believes that competition with a road and rail crossing will not be fair. It argues with some force that to survive a fixed link would have to take a significant proportion of the present ferry business.

If this business was unforthcoming it would have to cut its prices to the point at which the ferries' own future would be jeopardised.

Mr Jonathan Sloggett, chair-

man of Flexlink and managing director of Dover Harbour Board, says: "It is inconceivable that the banks backing the fixed link would let it fail. If the going got tough they would surely renege debt on terms which would allow them to assert their superiority over the ferry companies which would find it difficult to survive in that climate."

The other fear of the ferry companies is that the two governments would have to take over the crossing if it did fail. The lower operating costs of a bridge or tunnel, once debts were refinanced, would give ferries very little chance of survival.

At the very least the construction of a fixed link would destroy the commercial viability of the ferry routes on the Dover-Calais route, says Flexlink.

Reduced sailings
In reality the ferry companies believe they would lose even the busy Dover-Calais crossing, particularly if a high cost project like EuroRoute's road and rail scheme needed to generate the extra custom to pay for its development.

Mr James Sherwood, chairman of Sea Containers, the Bermuda-based shipping group, which is proposing to build separate road and rail tunnels under the Channel, is also a member of Flexlink.

Mr Sherwood in evidence last month to the all-party House of Commons transport committee, said that he would prefer it if no fixed link was built but if one was to be constructed he wanted it to be his scheme. He warned that there would be no future for ferries on the short sea routes to France and Belgium if a link was constructed.

He told the committee that it was ridiculous to suggest that the ferries could survive with even 80 per cent of the traffic on the busy short sea routes.

"This is rubbish, because if you think about how a ferry company operates, it operates to make money; it has to operate full ships. It cannot succeed by running ships which are only 30 per cent full."

"To take that 30 per cent of traffic and put it into full ships you have to reduce the number of sailings, perhaps to one every six hours, and the

moment you do that you are threatening the ferry business again, because nobody will wait six hours for a ship."

Sea Containers has warned that it will close down its short sea routes immediately a fixed link is opened. All 2,600 workers employed by Sea Containers on the routes would be made redundant unless the group itself won the mandate to build the crossing and the jobs could be transferred.

Flexlink says that if the crossing is built up to 40,000 jobs at ports and on ferries—60 per cent of them in the UK—could be lost, far more than the link itself would create.

The estimate is contained in the submission made by the ferry companies to government at the end of October. It said that nearly two thirds of these crossings were on the Channel route, which would therefore bear the brunt of the job losses.

The number of jobs lost would depend on which scheme was built. Flexlink says for example, the Channel Tunnel Group proposals for a twin-bore rail tunnel would cause fewer job losses than would EuroRoute's more ambitious road and rail scheme.

European Ferries, which runs the Townsend Thoresen line, says that longer-haul routes to the Continent would also be threatened.

It says that many of these routes from regional ports are only marginally profitable. European Ferries is currently negotiating to buy two new cross-Channel ferries for £70m which would be the largest vessels so far used on the Dover-Calais routes. It is ships like these which the ferry companies hope will give a fixed link a run for its money.

The ferry companies argue that new improved ships and better port facilities at Dover and Calais can meet the demand of cross-Channel trade in the foreseeable future.

They claim that a fixed link will be expensive, unnecessary, will drive ferry companies away and will therefore reduce competition and not increase it.

They continue to press their case but, like Mr Sherwood of Sea Containers, they believe that the decision to build a fixed link has, in practice, already been made.

A. T.

The Channel Project 7

EUROROUTE: An adventurous £5bn scheme involving a combination of tunnels and bridges and catering for road and rail traffic.

Imaginative scheme that will provide up to 75,000 jobs

SEVERAL nationalised industries and a string of some of the best-known corporate names in Britain and France are promoting EuroRoute's plans to cross the Channel by a combination of bridges and tunnels.

It is a bold and imaginative scheme which the Anglo-French promoters claim will sustain up to 75,000 jobs during the peak construction period. The disadvantage is its high cost and adventurous nature, which may not appeal to more conservative civil servants, financiers and politicians.

The proposals involve road bridges extending 8.5 km from the English coast and 7 km from France. These would lead to two artificial islands where the road spirals down to 30 metres below sea level to a 21 km-long submerged tube road tunnel which connects the two islands.

A third ventilation island built in mid-Channel would prevent a dangerous build-up of exhaust gases in the road tunnel.

The consortium has also submitted plans to construct a rail tunnel under the Channel. It has finally opted for a tunnel which will provide, initially, single-track working only. A second track would be provided later, EuroRoute says, depending upon negotiations with British Rail and SNCF.

The combined cost of the road and rail scheme has been estimated by EuroRoute as just under £5bn at 1985 prices. This rises to more than £6bn after allowing for inflation, interest charges and provisions to cover possible cost overrun.

Members of the EuroRoute consortium include on the British side: Associated British Ports, Barclays Bank, British Shipbuilders, British Steel, British Telecom, General Electric Company, John Howard, Kleinwort Benson and Trafalgar House.

French partners include: Alstom, Banque Paribas, Compagnie General d'Electricite, GTM Entreprense, Societe Generale and Isnor.

To pay for the road scheme, the shareholders plan to raise £6bn in development loans and £1.2bn in equity from international banks and financial institutions.

Bank loans of £2bn will be raised in Britain and France where Barclays, Banque Paribas and Societe Generale have provisionally agreed to provide £200m each.

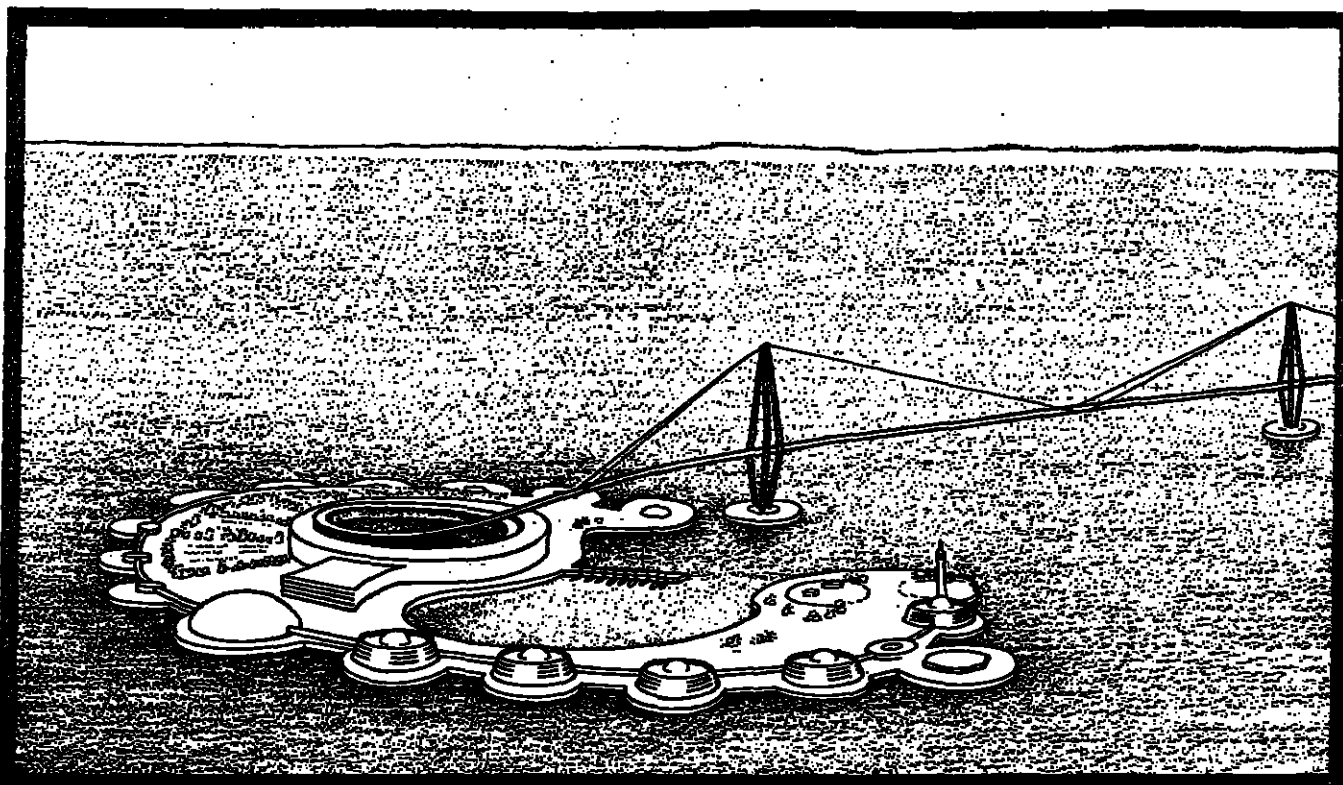
In addition, about a dozen banks from West Germany, Switzerland, Holland, Belgium and Japan and the US have said they would be prepared to act as lead managers for the £4bn of development loans EuroRoute intends to raise outside Britain and France. Each bank is provisionally committed to contribute at least £100m of its own money.

EuroRoute plans to raise the equity for the road scheme in three stages:

• £11m provided by the founding shareholders (GEC's contribution, for example, is £300,000) to cover initial costs throughout the project.

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• £50m to pay for work while treaties and legislation go through. Of this £12.5m will come from 32 UK institutions.



most insurance companies, £12.5m from the UK founding shareholders, and £25m which will be underwritten by the French shareholders.

Two separate sums of £25m to be raised in mid-1987, primarily from the London and Paris stock exchanges. The issue would involve four times as much convertible loan stock as straightforward equity and would also include revenue warrants.

Bond markets

In the latter stages of construction EuroRoute may use international bond markets to raise funds. Goldman Sachs and Shearson Lehman in the US, Deutsche Bank and Swiss Bank Corporation International in Europe and Daiwa Securities of Japan have been appointed to assist in bond and equity issues.

Kleinwort Benson, the merchant bank and stockbrokers Casanova are advising the consortium in the UK.

EuroRoute says one of its strongest appeals to government will be the large number of jobs it will create during construction in areas of high unemployment such as North East England and in Scotland.

France similarly will be able to channel work to areas of high unemployment.

The flexibility of the scheme to provide work hundreds of miles away from where the link will be built is possible because many of its components — the bridge piers, the artificial islands and sections of the road tunnel — would be prefabricated at steelworks and shipyards in Britain and France before being towed into place, assembled and finished.

A number of potential suppliers in Britain and France have been identified for a shopping list which includes: two concrete central cores for the artificial islands, each weighing about 500,000 tonnes; 31 steel cable bridge sections with 500m spans, 84 twin-bore 250mm long

steel and concrete tube road tunnel sections, 31 sets of bridge foundations and 36 protective concrete caissons for the islands.

Each of the two main artificial islands would be 700m long and 500m wide and capable of housing shops, hotels and parking for up to 2,000 vehicles. There are also plans to use the islands' harbour facilities valuable during construction and assembly — for yachting marinas.

Construction will rely heavily on techniques used during the successful development of North Sea oil and gas fields, says Sir Nigel Brookes, chairman of the British arm of EuroRoute and chairman of Trafalgar House, the construction, property, hotels and shipping group.

The main terminals to connect with the bridge and tunnel road crossing will be at Farthingloe, just west of Dover, on the British side and 5 km inland from Sangatte on

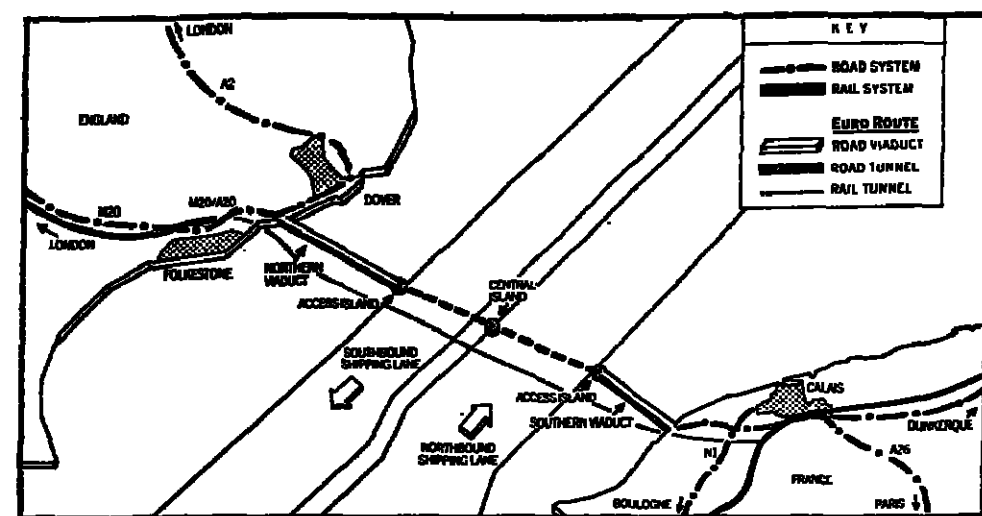
the French side. These will provide toll booths and one-stop customs and immigration facilities: once drivers have cleared one end of the bridge there will be no need to repeat border checks at the other.

Motorway services, fuel, refreshments and parking would also be provided at each end of the road link. Trusthouse Forte has been appointed to advise on passenger service facilities.

Vehicles using the road bridge would travel 56 m above sea level on the bridges before spiralling down inside the islands to the road tunnels. Wind deflectors positioned at the bridge sides would protect traffic but it is expected that very high winds will mean that the road will be closed to high speed vehicles for periods during very bad weather.

Two lanes of traffic would travel in each direction, widening to three lanes during the descent to the road tunnel. A wide hard shoulder enables vehicles to pull off the road at any stage during the crossing. There would also be emergency crossover points between the two road tunnels in the event of one becoming blocked.

Speed limits proposed by EuroRoute are 100 km per hour on the road bridges, 50 km an hour on the islands, and 80 km per hour in the tunnels. This, says the consortium, should enable drivers to travel the 41 km



early years. Peak hour traffic in the summer is unlikely to approach capacity levels until well into the 21st century the consortium says.

The costs to drivers are hard to determine for a scheme that will not open until 1993, but provisionally the consortium has done its sums on the basis of £65 for a family car with four passengers travelling one way from Britain to France.

It stresses that a drive-across scheme commands more popular support and is therefore a better solution than the twin-bore rail tunnel proposed by its strongest competitor, the Channel Tunnel Group.

There have been doubts whether a rail crossing, given that it will be competing for business with a road link, would generate sufficient revenue to justify the initial investment. It is for this reason that EuroRoute has been trying to arrange traffic guarantees.

EuroRoute says it has worked hard to resolve doubts about its rail scheme. It says that fears about its commitment to building the rail tunnel are misplaced. If it is to succeed it must also convince the success of the road and rail schemes involved in its project are not too high.

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Maximum capacity of the motorway link is about 3,000 vehicles an hour in each direction although EuroRoute's revenue forecasts assume only 20 per cent utilisation — about 4.5m vehicles a year, during the

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House of Commons transport committee split on which scheme is best.

Predatory pricing risk worries MPs

THE first opportunity British MPs have had to vote on the merits of the four contending schemes occurred two weeks ago and produced the narrowest of majorities in favour of Channel Tunnel Group's plans to construct a twin-bore rail tunnel under the Channel.

The vote taken by the all-party House of Commons Transport Committee underlines the wide differences in opinion, not just over the merits of the four schemes, but over whether there should be a fixed link at all.

The committee, which published its report on the Channel link on December 6, readily admits that some of its members "see no economic or social necessity for such a link."

The decision to back Channel Tunnel Group's plans was carried only after the casting vote of the committee's chairman, Mr Gordon Bagier, Labour MP for Sunderland South.

Almost as many MPs wanted to support EuroRoute's plans for a road and rail scheme involving a combination of bridges, artificial islands and tunnels.

A motion that no fixed link be built was defeated despite the reservations of some MPs about the need for the scheme and whether it would improve services to customers.

The two remaining schemes, from Channel Expressway and Eurobridge, were rejected by the committee, which questioned whether the building methods and technologies to be used on these schemes were sufficiently proven to allow them to go ahead.

Channel Expressway is proposing separate road and rail tunnels while Eurobridge wants to build a road bridge with 5km spans and a separate rail tunnel.

The committee is concerned that traffic restrictions might have to be made on Channel Expressway's road tunnel if it were to meet stringent requirements on ventilation established in guidelines published by the British and French governments.

The committee, for example, recommends that the widest possible discretion should be used to hear all members of the public who want to make objections to the link during the committee's stage of the hybrid Bill which is to be introduced in Parliament once a treaty with France is agreed.

However, the committee has agreed with the Government that a public inquiry is not needed. It says the concept of a fixed link is not new and various proposals have been

widely discussed over many years.

Other recommendations in the report include:

• The publication of a White Paper as soon as a scheme is chosen;

• Closer examination of promoters' claims on cost, construction and traffic and revenue forecasts which may give the appearance not so much of objective analysis as of shop windows in which the better to display the promoters' various schemes;

• Detailed studies of the environmental impact claims made by all the promoters and close monitoring of the effect on local areas during construction;

• Closer examination of measures to minimise adverse effects on employment.

The committee has also been concerned that a fixed link operator might adopt predatory pricing in a bid to force the ferry operators and establish a monopoly, even if this means that the link would be loss-making at first.

"It will be in the interest of any fixed link proposer to paint as rosy a picture of prospects as possible in order to obtain this dominant position. An over-optimistic representation of the fixed link's competitive advantage over the ferries does not matter if it has the effect of gaining the franchise and eliminates the competition," the report says.

"One must therefore beware of accepting that because a scheme can attract finance, the traffic and profit forecasts which accompany it have some kind of market-tested validity."

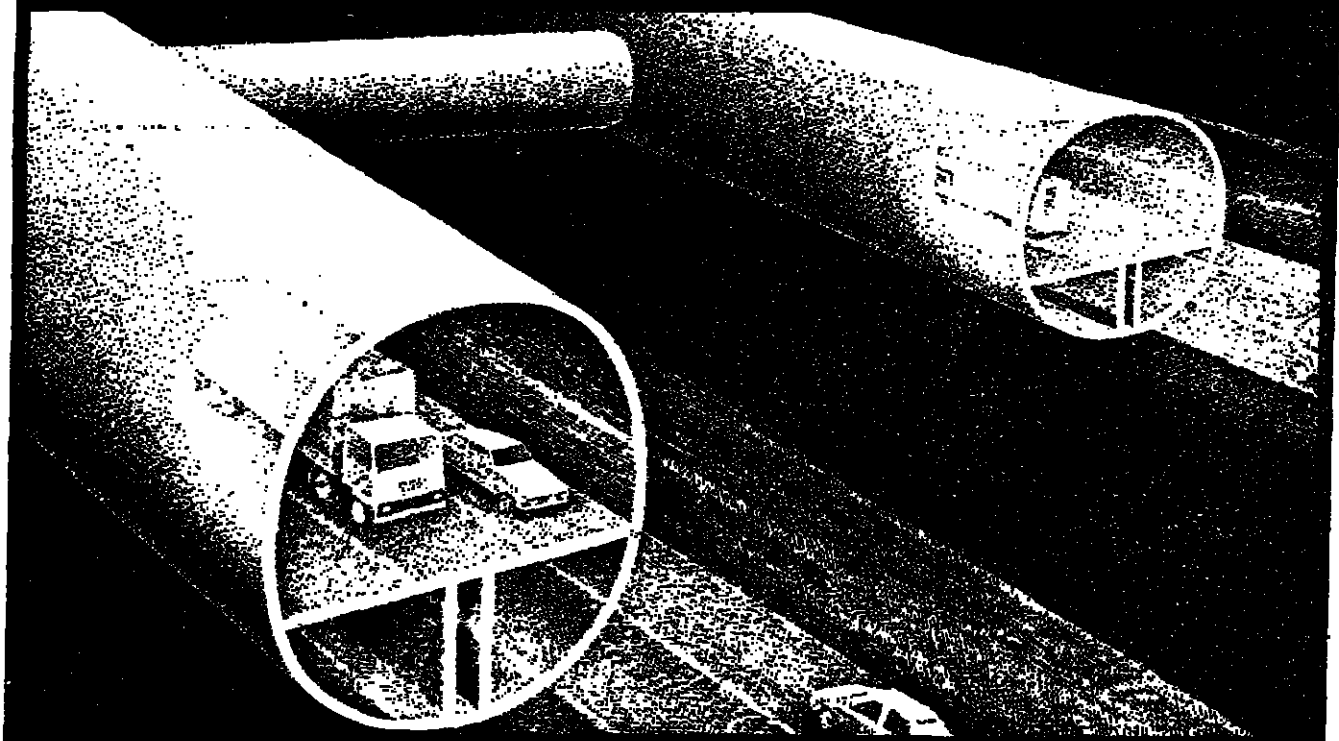
The committee recommends that the Government "ensure that a mandate to proceed with the scheme provides safeguards against predatory pricing and abuse of an effective monopoly position."

It rejects demands that any concession to a private operator of a fixed link be of a short duration only to prevent excessive exploitation.

The operator would be subject to normal monopoly controls and would be monitored by the Office of Fair Trading or some similar body, it says.

"Another option might be some form of sliding scale of tax liability similar to that which applied to oil revenues. This would ensure that in the event of high profitability the taxpayers of Britain and France would benefit and it would act as a disincentive to charge what the traffic would bear."

A. T.



EXPRESSWAY: Late entrant with plans for separate road and rail tunnels.

Plan which would keep 2,600 in work

SEA CONTAINERS, the Bermuda-based shipping group behind Channel Expressway's plan to build separate road and rail tunnels under the Channel, is also a member of Flexlink, the consortium which strongly opposes the construction of any fixed link at all.

Mr James Sherwood, chief executive of Sea Containers, says he would prefer that the link was not built but if the development goes ahead he wants it to be his scheme.

At stake, he says, are the jobs of 2,600 workers employed by the group on its short sea routes to Belgium and France. Mr Sherwood says he would close down these routes the day a fixed link opened. The only way to save the jobs would be to give the mandate to build the link to Sea Containers' subsidiary, British Ferries.

Channel Expressway, founded by British Ferries, is a late entrant in the race to build the link. Its plans were not disclosed until the very last day for submitting proposals to the British and French governments.

It, therefore, starts at a disadvantage as British and French officials have had so little time to assess the proposals before they have had to make their joint report to ministers.

Sea Containers' rivals have had much longer to prepare their plans, react to criticism and modify their proposals accordingly.

Channel Expressway, however, has made considerable progress since its plans were announced and is regarded as a very strong contender — now that it has overcome some of

its teething problems. One obstacle which has been cleared is the railways' objections to the proposals.

Sea Containers had originally planned to build a motorway tunnel with a rail track running through it. This proposal, following criticism from British Rail and SNCF, has been scrapped and the group now plans to build separate road and rail tunnels.

The group has also been winning friends among the British government and is a strong competitor to Channel Tunnel Group which is offering a rail only tunnel.

Plans modified

The British government would prefer a road and rail option as it fears that militant rail unions could hold future governments hostage if they controlled the crossing.

Nonetheless, there are reservations about Expressway's plans. It has to convince that the technology it plans to use to overcome ventilation problems will work; that it is capable of raising the necessary finance; that it has paid sufficient attention to attracting French support; and that cost estimates are not over-optimistic.

A recent report by the all-party House of Commons Transport Committee rejected the Expressway proposals on the grounds that they did not satisfy the government guidelines on ventilation standards.

The group's plan is to install electrostatic precipitators at regular intervals along the

50 km twin-bore motorway tunnel. Air is cleaned of carbon and other solid exhaust components by drawing it across the precipitators located in bypass tunnels. A similar system is used to remove solid material from gases emitted by power plants and has been adapted for use in road tunnels in Japan.

"The system is currently used effectively in the Enasua and Kan-Etsu tunnels in Japan," says Sea Containers, "and though neither is even half as long as the proposed Channel tunnel there will be no technical difficulty in extending the system to the much greater length."

In addition, Expressway plans to use North Sea technology to construct two ventilation shafts in the inshore shipping lanes off the coasts of Britain and France.

MPs on the transport committee claim, however, that the road scheme would need a much lower capacity than that proposed by Sea Containers to satisfy government guidelines on minimum ventilation levels.

To finance the scheme Sea Containers, like its main rivals, proposes to use a mix of equity and development loans. Cost of the road and rail schemes combined is estimated by the promoters at about £2.5bn at 1985 prices. This rises to more than £3bn after allowing for the effect of inflation at an average rate of 5 per cent a year.

Channel Expressway insists that it can build both schemes at the stated cost but the prices are regarded by its rivals as highly over-optimistic.

To raise finance (using 1985

prices), Expressway intends to issue about £400m in equity split roughly equally between Britain and France, with Sea Containers itself taking about £100m.

The remainder of the cash, about £2bn, is expected to be raised by tapping international financial markets for development loans. Credit du Nord of France and First National Bank of Boston would lead the fundraising.

Once the link is built the operators intend to expand the equity base, replacing bank debt with long-term debt.

An early criticism of Sea Containers' plans has been the lack of an identifiable French partner in what after all is to be an Anglo-French venture.

Mr Sherwood, at time of writing, was pursuing a major French name in order to resolve this position.

Mr Sherwood denies that his costings are unrealistic. Instead, he says there are conflicts of interest in rival consortia containing major construction companies which would obviously seek to win lucrative contracts if their group wins the mandate to build the link.

Expressway's plan is to construct a twin-bore tunnel, each tunnel with a diameter of 11 m to contain a two-lane highway with a wide hard shoulder, more than 50 km from coast to coast.

The longest tunnel through which cars drive at present is the St Gothard in Switzerland which is 16 km long. Channel Expressway's submission to the two governments includes a psychologist's report which

examines the possibility of drivers being mesmerised or facing psychological problems at a result of driving through the much longer Channel tunnel.

It concludes that modern devices for keeping drivers alert such as strong lighting, signalling variations in road surface, colour, and design, which are incorporated in the scheme, will be sufficient to prevent accidents from such causes.

There will also be regular cross-over points between the tunnels as well as sophisticated electronic surveillance and traffic controls to maintain traffic flow and to assist with emergencies.

At either end of the road tunnel would be terminals staffed, on the British side, just north of Cheriton, a suburb of Folkestone, and at Sangatte, south west of Calais on the French coast. These would provide customs and immigration facilities as well as toll booths, shops and restaurants. There are no plans to include duty-free facilities as Sea Containers believe these will be precluded at frontier posts under EEC regulations.

The cost to motorists has been estimated at £40 for a private car and driver for a single journey (at 1985 prices) with a special day return rate of £20.

Expressway's low cost and its road crossing as well as a rail link, will make it hard to resist, but first Sea Containers has to overcome the reservations about some aspects of its proposals.

A. T.

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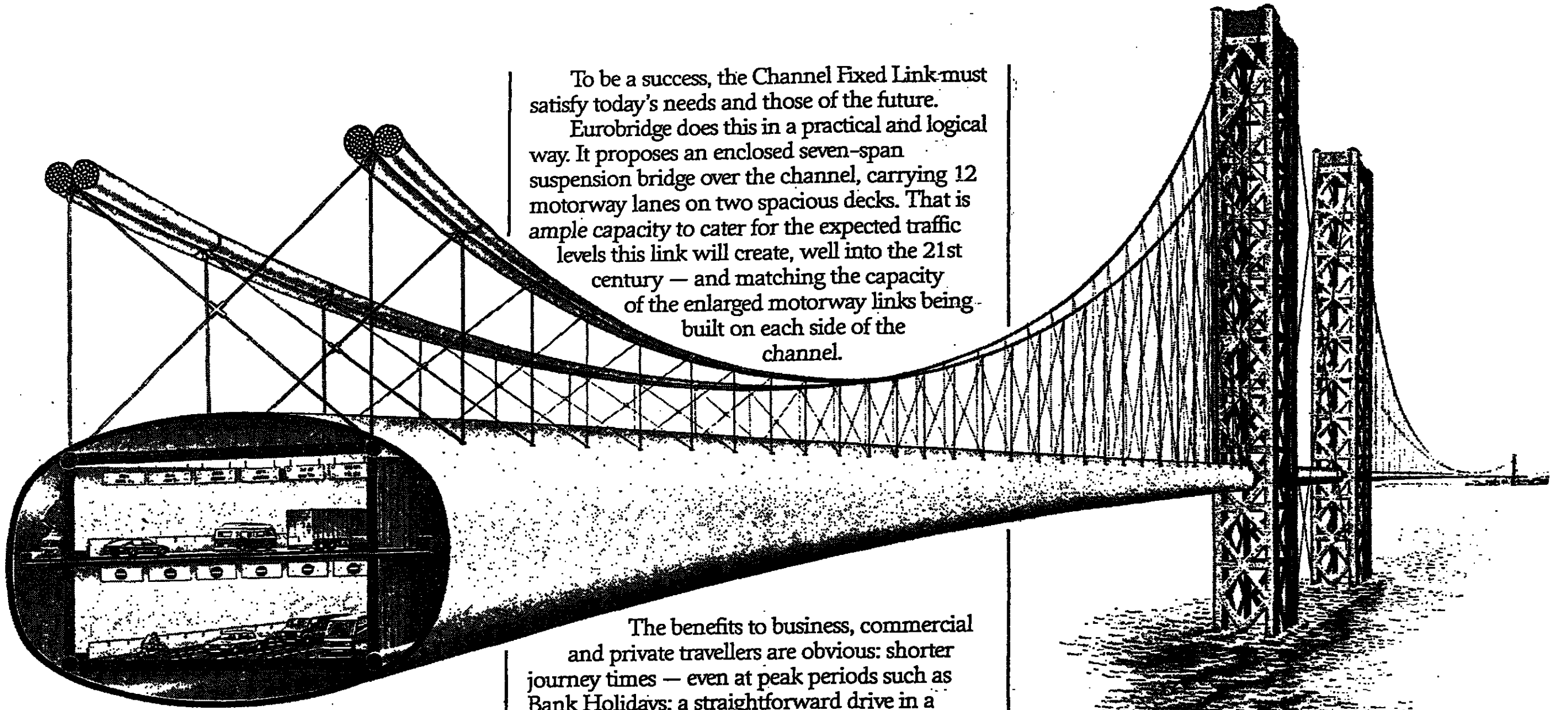
James Sherwood, chief executive of Sea Containers. His group has changed its plan.

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Eurobridge caters for the needs of the rail traveller, too. A fundamental part of the proposal is a single rail tunnel for use by BR and SNCF to be built simultaneously with the suspension bridge.

Eurobridge will produce a healthy return on capital; one reason why Eurobridge is receiving so much support from influential British and French industries.

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eurobridge

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The following have co-operated in the preparation of Eurobridge Studies' submission for the Channel Fixed Link Project:

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Happy Christmas
from

TAYLOR WOODROW

SECTION II - COMPANIES AND MARKETS

FINANCIAL TIMES

Monday December 16 1985

Happy Christmas
from

TAYLOR WOODROW

Association moves closer towards international status

THE Association of International Bond Dealers (AIBD) is on its way to becoming an international exchange writes Maggie Urry in London.

That may seem an odd idea to those who in the past have regarded it as little more than a drinking club. But the new role is envisaged for the AIBD in the self-regulatory framework to be set up under investor protection legislation.

Mr Damien Wigoy, the AIBD chairman, said at the extraordinary meeting last Friday that the international bond market did more business in a week than the London Stock Exchange did in a year.

The meeting was another step along the way to exchange status. An exchange must have rules and codes of conduct for doing business, something the AIBD has always had. But now that the rule-making power has been passed to the board, subject always to the annual meeting's veto, changes to rules can be made much more speedily in reaction to developments in the market.

The new system of electing the board was regarded as part of a reform package. It was vital that, if the board was given greater power, it should be seen to be democratically elected and have the ablest possible members.

Another part of being an exchange is ensuring good price information. The AIBD has been gradually moving from monthly to weekly and then daily price lists. The next step could be to a screen-trading facility - the subject of a study to be completed by September 1986. A system along the line of Nasdaq, the US over-the-counter equity dealing screens, is suggested.

This will need careful consultation with traders who, it is generally thought, "do not like dealing on screens." Traders do not want their business to be too open, they may want to make different prices to different people, and they like to

see the people with whom they are trading. They possibly also fear for their jobs. In the 1970s a system called Eurex was tried and failed.

The contrary view is that the screens could take away the drudgery and the unprofitable parts of a trader's job, giving him more time to serve clients. Screens are already making an appearance in the Eurobond market and have taken much of the business in the US Treasury bond market. The AIBD is keen that, if there is to be an automated system, it should be one meeting members' requirements and not one imposed from outside.

Screens could free traders from having to quote prices to people who do not then deal - prices could be checked onscreen. Trades in small amounts could be done onscreen and settled through the computer - the cost of processing such deals often exceeds the profits of doing them. That should add liquidity to the parts of the market not otherwise reached.

Further, with prices on screens, there is greater transparency and hence more protection for investors.

● Away from the investor-protection question the problem of settling internal disputes is also under review, and the AIBD board will be putting proposals for changes to the statutes at the next annual meeting in May.

Experience of using the arbitration procedure set out in Article 22 of the AIBD's statutes has shown that the process is lengthy and costly. The suggestion is that a step before arbitration should be required - that of conciliation. If two parties can settle a dispute without bringing in expensive lawyers, all the better. If not, the arbitration process can still be followed.

Here the AIBD would like to take a more active role, for example by setting up a panel of arbitrators. At present each arbitration starts with the writing of its own set of rules.

US rally takes the shine off swaps

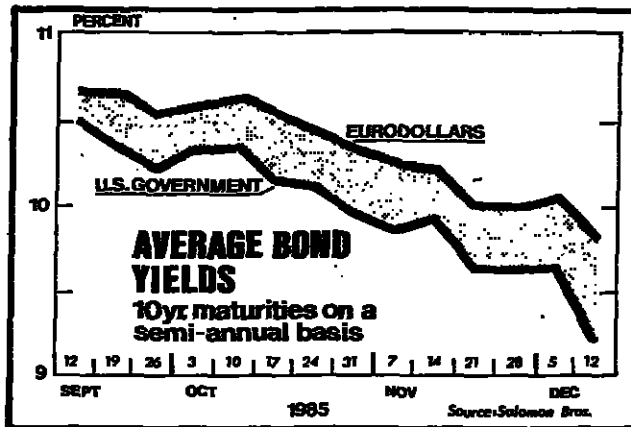
EURODOLLAR syndicate managers think only about "spreads to Treasuries" these days when pricing fixed-rate deals, writes Maggie Urry in London.

By that, they mean the yield on the bond compared with the US Treasury yield for a similar maturity. These spreads are all important, and last week they were moving against the Eurobond market.

The strong rally in the New York market last week meant yields were falling faster there than in the Eurodollar market which, as usual, lagged the rise. Consequently swaps, priced by reference to Treasury yields, are not attractive and borrowers can obtain cheaper funds through an issue in New York.

New issues launched at the start of the week, such as Equitable-Lord's deals, were trading comfortably within their fees by Friday, but at much wider spreads.

This widening deterred most borrowers towards the end of the week, but Procter & Gamble was still able to launch a deal on Friday afternoon with a 15-year life and a 9% per cent coupon. It came at a



spread of 45 basis points over the 10-year Treasury (there is not a suitable 15-year comparison) taking account of the fees payable, seemingly not an outlandish margin. But dealers pointed out that the yield was slightly below 20-year Treasury yields and that other Procter & Gamble paper yields more.

Still, it is a mark of the recent strength of the market that coupons, even on such long-dated paper, are now well below 10 per cent. Some borrowers may look at that absolute level and not worry about "spreads."

Investors are now clearly slowing down for Christmas, and many syndicate managers are hoping to save up deals for the new year in order to have a good run at the league tables. Borrowers have caught on to the fact that in January new issue houses may be willing to give even better terms.

With retail demand drying up the Euro-Australian sector of the market cannot cope with the weight of new issues. Six deals have come in the past two weeks into a market where two would probably satisfy demand. But with coupons so far

below domestic levels, despite the 1-point rise engineered by Citicorp Bank for the ANZ Banking issue, swaps work. And it is generally the swaps that drive the deals rather than the buying demand. So there could still be more deals coming.

Demand does seem to have picked up for European fixed-rate bonds, and the three which were launched last week all traded with commissions. More of these issues are expected. Dual-currency deals did not fare so well, with Monsanto's issue well outside commissions.

Flotations are still the talking point in the D-Mark market, with investors showing a marked dislike of the deals' maximum coupons. The EIB's issue was not seen trading away from lead manager Commerzbank, and it is thought all the bonds will be kept in-house. The other two were trading at discounts around the commissions.

Prices for fixed-rate deals were up by as much as 1/4 point last week though volume is still low.

The Swiss franc foreign bond market was also higher last week by around 1/4 point. The novel perpetual issue for Air Canada, which does not have any coupon refuges, was practically sold out despite its size, though some traders regard it

as risky. It was trading around par on Friday.

The People Express convertible issue is due to start trading on the stock exchanges today with traders calling it 98% on Friday.

In the new issue market Donaldson Luffkin Jenrette, the wholly owned subsidiary of Equitable Life Assurance, launched a SFR 200m public deal. This has a put option in the event that the company becomes less than 60 per cent owned by Equitable.

● Euro-clear, the settlement system for international securities, is simplifying its fee structure by eliminating transaction fees from January 1 next year. Safekeeping and bond-borrowing fees will also be reduced. It is estimated the change will cut user's fees by more than \$15m in 1986. The board expects results for 1985 to have been "excellent" and anticipates that rebates of fees for 1985 will exceed \$15.4m, up from \$7.9m in 1984.

● Hundreds of thousands of dollars came in for the Bond Aid appeal for the Save the Children Fund last week, and Sir Nicholas Goodison, stock exchange chairman, has given his support. Donations are still being accepted this week, with anonymous gifts welcome. The organiser's phone number is 01-3828508.

Carbide plans \$230m disposal

UNION CARBIDE, the multinational chemical company which is facing a hostile takeover bid from GAF of the US, is selling its worldwide film-packaging business for \$230m, writes William Hall in New York.

Mr Warren Anderson, Union Carbide's chairman, described the sale of the group's 11 manufacturing plants and three service centres to Chicago-based Envirodyne Industries as part of the company's corporate restructuring programme, announced in August.

"Film-packaging is a stable business but no longer fits Union Carbide's strategic objectives," Mr Anderson said. Mr Ronald K. Linde, chairman of Envirodyne, described the acquisition as "an excellent well-managed business that will enhance Envirodyne's presence in manufacturing and supplying products to the food industry."

The major shareholder in Envirodyne, which makes plastic cutlery, is Artra, controlled by the Harvey family of Chicago. Artra has interests ranging from costume jewelry to plastic drinking straws.

The business manufactures and sells cellulose casings and related systems for processed meats and poultry for worldwide markets.

EURONOTES AND CREDITS

Romania surprises by returning for a further \$150m

BY PETER MONTAGNON, EUROMARKETS CORRESPONDENT, IN LONDON

ROMANIA has surprised international bankers by returning for a further \$150m credit barely a week after its first large borrowing operation since 1980 was signed.

It is understood to have mandated Kuwait Foreign Trading Contracting and Investment for the new deal, which is to be for five years. Interest margins are expected to be 14 per cent over London interbank offered rate (Libor) for the first 24 years, rising to 1% per cent thereafter.

The deal is expected to be mainly

an Arab bank affair, especially since elsewhere the market shows every sign of closing down for the Christmas holidays. The assumption is also that Kuwaiti institutions are interested in lending to Romania because of that country's need to import oil.

But the deal, for what is traditionally regarded as a difficult borrower, also illustrates how the market for East European borrowers has opened up in a way that eludes their counterparts in Latin America. OECD figures show that they raised nearly \$4m in the Euro-

market in the first 11 months compared with \$3.5m in 1984.

Some senior US bankers now argue that the revival from the dark days of 1981 and 1982, when lending almost dried up, suggests that there is scope for Latin America to revive "voluntary" loans.

The background is very different. Faced with the debt crisis, East European countries undertook a brutal adjustment, which saw their bank borrowings fall sharply. At \$51.5bn by mid-1985, those were still more than \$9bn less than their total at the end of 1981.

In contrast, according to the Bank for International Settlements, borrowings by Latin America increased in the same period to \$211.5bn from \$156.4bn. In other words, repayments by Eastern Europe have created space for fresh loans, whereas in Latin America they have not.

Among the few new other deals last week were a \$200m Eurocommercial paper and certificate of deposit programme announced by Credit Suisse First Boston for State Bank of South Australia. Northern

Indiana Public Service, a gas and electric utility, has mandated Merrill Lynch to arrange a \$70m, three-year standby facility.

That carries an annual fee of 20 basis points and allows for the sale of notes at a fixed margin of 20 basis points over Libor. It will be used to back up sales of commercial paper in the US.

Gas de France has pulled in \$245m from the market in syndication of its \$700m facility. The bulk of the subscriptions came, as expected, from Japanese institutions.

EUROMARKET TURNOVER Turnover (\$m)				
Primary Market	Secondary Market	Com	FRN	Other
US\$ 3,385.5	4.3	594.5	527.5	
£ 2,742.5	276.5	5,377.3	265.9	
Other	548.5	4.2	25.1	177.3
Pre	828.3	282.7	1,785.5	145.6
Secondary Market				
US\$ 15,825.5	1,373.2	14,403.5	2,282.7	
£ 16,893.5	1,858.0	12,073.3	2,167.9	
Other	4,164.8	135.5	2,465.8	2,176.2
Pre	8,777.8	287.5	2,948.5	1,871.1
Cash				
US\$ 11,748.5	27,822.1	38,595.6		
£ 12,420.8	31,891.9	44,011.9		
Other	5,225.8	4,148.8	9,875.6	
Pre	6,028.1	7,025.3	15,945.3	
Week to December 12 1985 Source: AIBD				

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New Issue / December, 1985

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INTERNATIONAL CAPITAL MARKETS AND COMPANIES

Maggie Urry reports on a new player in a \$400bn a year Euro-securities game

Pru-Bache opens up a swaps warehouse

IN AN old East India Company warehouse on the edges of the City a new kind of storage business has been created. Gone are the dusty tea-chests, and in gleaming new offices Prudential Global Funding now stacks electronically the swaps it has taken on as principal.

A swap is created when two borrowers agree to exchange the interest payments on their debts. There is no exchange of principal. If one borrower has raised, for example, fixed-rate debt but would like floating-rate debt, it can find a counter-party to issue floating-rate debt and the two can swap the stream of payments. The same idea can also be applied to borrowings in different currencies.

Lining up a counter-party at the same moment as a bond issue is launched is the difficult part and this is where Pru-Bache, and the handful of other houses which operate swap warehouses, can step in. The firm has a triple-A credit rating thanks to its parent the Prudential Insurance Company of America. It can act as one side of a swap, holding the position and balancing it with other swaps in the warehouse.

The idea for the swap warehouse came from Prudential-Bache. Securities, the investment firm formed when Prudential took over Bache in June 1981. In the last couple of

years, as swaps have been increasingly important in the international bond markets, it has become clear that a securities house must have a swap capability if it is to get into the big league.

It was then up to Pru-Bache Securities to sell the concept to the Prudential, and in December last year Dickson Brown was hired from Citicorp's swap department to work on the proposal. He argues "you cannot be in the securities business without being in swaps, you must do both or you will get murdered". He estimates that worldwide swap transactions this year will have totalled \$400bn, a figure double most guesses of the market size. A few years ago the business barely existed.

Particular logic to Prudential

The idea had a particular logic. Prudential, which as a major insurance company had huge funds to invest. Much of its lending had in the past been in the form of private placements to the typical "middle America" corporate at high rates of interest. These companies were beginning to find that they could borrow from their banks on a floating-rate basis and swap the

proceeds into fixed-rate money at a lower cost than they were paying the Prudential, taking away the Pru's business.

Five months after Mr Brown joined Pru-Bache the approval of the Prudential was gained and in June Prudential Global Funding opened for business with a capital of \$10m. It has offices in New York and London and will soon open in Tokyo as part of Pru-Bache's operations there.

Since then, the business has grown at a far faster rate than even Mr Brown expected. There is now \$4bn worth of swaps in the warehouse. Because there is no exchange of principal the risk involved is the interest rate exposure.

As a consequence stock control is rather more advanced than it was in the days of the old merchants who originally occupied the building. By separating out the constituent parts of each swap the computer works out every day the firm's net exposure to interest rate moves, which is generally surprisingly low in relation to the size of the portfolio. This exposure is then hedged.

Nor do the swaps languish in the warehouse gathering dust. The average shelf life of a swap is only five to 10 days.

Since the start up 110 swaps have been arranged—a far higher figure than even Mr

Brown had expected. And the portfolio is much more diversified than he had predicted too, with the corporates taking a smaller proportion of the total.

Generating business for other parts

But as well as providing work for the swap team, the new warehouse has generated business for other parts of Pru-Bache. The firm was a small player in the Eurobond new issue market taking part in only a few deals. Since June it has co-ordinated 14 Eurobond issues. Putting the primary bond market department together with the swap experts has created more ideas and the firm's swap capabilities "makes Pru-Bache a very interesting partner," says Brown.

The extra benefits spread even wider. As primary market activity increases the firm's salesmen have a wider range of bonds to sell to clients. "Sales volume has doubled every month since I have been here," says Ged Smith, Pru-Bache's syndicate manager who joined in August. The secondary market side, where there has been a revolution in personnel following the departure of Christopher Maytum and the bulk of the trading team, has had more to do, for instance

as the firm buys blocks of older issues and swaps them to create synthetic securities.

Further than that Prudential Global Funding's activities provide work for the firm's US Treasury traders and futures traders too. As an example Mr Brown, whose Wall Street banker veneer crumbles to reveal his Scottish origins when excited, demonstrates how the firm created over \$600m-worth of business by buying \$100m of the UK Government's floating-rate note issue. Through swaps and hedges involved in repackaging the deal into a fixed-rate issue, which was then syndicated and sold in the Eurobond market, the firm produced business far beyond the simple swap fees.

Mr Brown believes that firms who do not have this presence in all the various parts of the international capital markets will not survive. He reckons that there are about 20 institutions worldwide which are in a position to compete and that there will be a dramatic polarisation of houses in the market. What's more, he says, "the firms that are successful are essentially the consensus firms," houses where people work together.

In Prudential Global Funding profitable then? Mr Brown laughs. "Let's just say that the Prudential is happy with the return on its investment."

Saudi bank's nine-month net earnings slip 25%

BY OUR FINANCIAL STAFF

AL-BANK al-Saudi al-Fransi is the seventh Saudi bank to post weaker earnings for the first nine months of 1985. It reports a 25 per cent fall in profits to \$1.3m from \$1.8m in the same period last year.

Five of the banks that reported earlier showed nine-month profit declines of between 10 and 72 per cent. The sixth posted a loss. Saudi Arabia has 11 commercial banks. Saudi Fransi's unaudited balance sheet, showed that 67.8m riyals were added to provisions. This is 4m riyals more than a year earlier.

The bank is 40 per cent owned by Banque Indosuez of France and the rest by private Saudi shareholders. Its assets jumped to 13.05bn riyals at end-September from 11.81bn riyals a year before.

Saudi banks are posting nine-month earnings and loan-loss provisions for the first time this year. Bankers say the Saudi Arabian Monetary Agency wants more explicit reporting by banks.

However, Mr Mohammed Abu Al-Khalil, Saudi Minister of Finance and National Economy, points out that the Kingdom's average bank profitability is still higher than the world average.

Mr Al-Khalil said that the top 500 banks in the world had average profit-to-asset ratios of 0.63, while Saudi-Arabian Bank has a ratio of 1.2 per cent and Arab National Bank has a ratio of 1.68 per cent.

The Minister also said Saudi banks are less leveraged than the world average.

Exxon in Timor Sea oil deal

By Our Financial Staff

EXXON Corporation's Australian subsidiary has agreed to purchase Cito Australia Petroleum from Occidental International Exploration and Production.

The price of the purchase was not disclosed, and the transaction is subject to government approvals. If it goes ahead, the move will give Exxon access to oil prospects in the Timor Sea off the North coast of Australia for the first time.

Cito Australia holds an 18.75 interest in the Jabiru oil field, which is about 600 miles west of Darwin and the only commercial oil discovery in the Timor Sea so far. Broken Hill Proprietary owns 50 per cent of the oilfield and is the operator.

The Jabiru field is expected to go into production in mid-1986, putting out about 13,000 barrels of oil per day.

Otis South Africa lifts payout as profit improves

BY JIM JONES IN JOHANNESBURG

OTIS ELEVATOR, the 70 per cent-owned South African subsidiary of United Technologies of the US, increased turnover and profits in the year ended November 1985 and has continued to pay out almost all of its profits.

Turnover rose to R59.7m from R50.7m in the previous year, and the pre-tax profit increased to R15.7m from R13.9m.

The company expects the current year's trading to be difficult, though Otis has sufficient work on hand. Otis was among the first American-controlled companies to pay out in dividends its entire distributable reserves in order to reduce its South African profits content.

Earnings rose to 47.4 cents a

share from the previous year's 41.1 cents. The total dividend has been raised to 44 cents from 40 cents.

Dunlop and BTR have agreed terms for the merger of their South African operations.

Dunlop South Africa will issue 5.2m new shares to BTR shareholders in the proportion 35 Dunlop shares for 100 BTR. Following the acquisition, BTR's listing on the Johannesburg Stock Exchange will be terminated.

The terms have still to be agreed by shareholders. However, BTR and Gold Fields of South Africa, which together own 77.2 per cent of BTR South Africa's equity, intend to accept.

NEW INTERNATIONAL BOND ISSUES

Borrower	Amount	Maturity	Av. life	Coupon	Price	Book Name	Yield
U.S. DOLLARS							
Equitable-Land Ry	100,765	1995	9.47	10%	98%	Goldman Sachs	10.45%
Equitable-Land Ry	100	1987	11.53	10%	98%	Goldman Sachs	10.45%
World Bank	200	2001	15	10	100%	Shearson Lehman Bros.	10.45%
World Bank	500	2002/14	—	8	100%	Shearson Lehman Bros.	10.45%
State & Napier Ass. & British Petroleum	60	2008	15	(5%—5%)	100	Shearson Lehman Bros.	10.45%
Belgium	150	1993	7	8%	100.1	Morgan Stanley	10.45%
Belgium	150	1996	10	8%	100.1	Morgan Stanley	10.45%
Belgium	250	2011	25	8%	100%	Morgan Stanley	10.45%
European Economic C	100	1995	10	8%	100%	Shearson	10.45%
Swedish Export Cr.	100	1993	7	8%	101%	CSFB	10.45%
Public Service B. & Gas	75	1996	10	8%	100%	CSFB	10.45%
Banque BV (N) 11	100	2007	15	7%	100	Salomon Brothers	10.45%
EDC of Canada (N)	150	1991	5	8%	98.55	Goldman Sachs	10.45%
Procter & Gamble	150	2001	15	8%	100%	Goldman Sachs	10.45%
AUSTRALIAN DOLLARS							
Bank Group	75	1995	10	11	100	SBIC	11.00%
ANZ Banking	50	1998	8	15%	100%	Bank Royal Belg	10.45%
Total	40	1990	5	14%	100	Shearson	10.45%
R. Nat. d' Agriculture	40	1991	5	15%	100%	CSB	10.45%
D-MARKS							
Marum Schenck (N) 11	25	1990	5	2%	100	CSFB-Eurobank	2.85%
Deutsche Credit (N) 11	250	1995	10	7%	100	World	—
Wolfsburg (N) (N) 11	300	1998	10	7%	100	Deutsche Bank	—
Japan Fin. Corp.	100	1992	7	6%	99%	Deutsche Bank	8.40%
ER (N) 11	125	1990	5	7%	100	Commerzbank	—
SWISS FRANKS							
Wolfsburg (N) 11	50	1990	—	2%	100	Banco del Estado	2.50%
Atsugi (N) 11	50	1991	—	2	100	SBIC	2.50%
WVF-Stock	25	1993	—	5%	100	Swiss Bank	5.70%
Al Canada	200	1990	—	5%	100	SBIC	—
Swissbank Ltd. & J. J.	200	1990	—	5%	100	First Chicago	8.40%
ECUs							
Imvros (N) 11	50	1995	8	8	100	Kanabits-Globe-Prud	8.40%
Convent	40	1993	7	9	100	Kanabits-Globe-Prud	8.40%
Swedish Export Cr.	50	1993	4%	8%	100%	Morgan Stanley	8.40%
FRANCO FRANKS							
Crédit National	500	1993	7	10%	99%	Société Générale	10.45%
LUXEMBOURG FRANKS							
Dynalco (N) 11	300	1991	5	6%	100%	Kanabits-Globe-Prud	8.41%
Copenhagen Tel.	500	1990	10	8%	100	Kanabits-Globe-Prud	8.41%
YEN							
Alfaro & Co. (N)	200	1990	10	8	101%	Nomura Int.	7.75%
Alfaro Signal	200	1993	7	8%	101	Nomura Int.	7.75%
Woorin (N)	100	1990	10	8%	101%	Bank of Tokyo Int.	7.75%
Transocean Fin.	100	1991	5	8%	101	LTCS Int.	7.75%
Environ	200	1993	7	8%	101%	White Sect. (Europe)	7.75%

* Not yet priced. † Fixed terms. ** Private placement. † Floating rate note. † With apply warrants. † With bond warrants. † Dual currency. (a) 1/4 over 5m Libor, maximum coupon 8%. (b) 3/4 over 5m Libor, maximum coupon 8%. (c) Equal to 5m Libor. (d) 3/4 over 5m Libor. (e) Extendible to 2000. (f) Landed on US domestic market. (g) 1/4 over 5m Libor, maximum coupon 7.75%. (h) 3/4 over 5m Libor. Note: Yields are calculated on ABSI basis.

Computerland agrees to public share offer

BY LOUISE KEHOE IN SAN FRANCISCO

COMPUTERLAND, the largest US computer retailer, has agreed to make a public share offer as part of the interim settlement of an extraordinary legal dispute that has threatened the future of the computer-store franchise chain in recent months.

The share offer, which will take place when the company's board judges the market to be positive, could raise as much as \$200m, according to Computerland investors. Computerland has over 800 fran-

chised computer stores and posted total sales of about \$1.4bn in 1984.

Under the terms of the out-of-court agreement, Computerland founder Mr William Millard will step down as chairman, and his daughter Barbara, former Computerland president, will also give up her seat on the Computerland board.

The agreement marks a truce in a bitter battle for control of the company which began with a suit filed by an investor group called Micro/Vest alleging that Mr Millard failed to pay off a nine-year-old promissory note for \$250,000 for which the group claimed, Mr Millard had pledged 20 per cent of his holdings.

Micro/Vest won a judgment for 20 per cent of Computerland's stock plus \$14m in damages earlier this year. Ever since, Mr Millard has been threatening to appeal, but to do so he needed to raise a \$25m bond, which apparently proved impossible.

NOTICE OF REDEMPTION
GENERAL MOTORS
ACCEPTANCE
CORPORATION
OF CANADA LIMITED

Canadian \$75,000,000 16% Notes due January 5th, 1987

Pursuant to the terms of paragraph 8 (a) of the Notes, which provides that at any time on or after January 5th, 1986 the Notes may be redeemed at the option of the Company, notice is hereby given that General Motors Acceptance Corporation of Canada Limited intends to redeem on January 6th, 1986 the Cdn. \$75,000,000 16% Notes due January 5th, 1987 at a price of 101% of the principal amount together with interest on such principal amount accrued and unpaid to the said date of redemption.

The redemption price of the said Notes shall be payable on presentation and surrender thereof with all unmaturing coupons at any one of the following paying agencies:

BANK OF MONTREAL
Toronto Securities Service Centre
B1 Level, First Canadian Place
Toronto, Ontario
MSX 1A1
Canada

BANK OF MONTREAL
9 Queen Victoria St.
London EC4N 4XN
England

BANQUE BRUXELLES LAMBERT S.A.
60 Cours St. Michel
1040 Bruxelles,
Belgium

CHEMICAL BANK
Freitagstrasse 16
8039 Zurich,
Switzerland

BANQUE GÉNÉRALE DU LUXEMBOURG S.A.
27 Avenue Monterey
P.O. Box 1906
Luxembourg

CHEMICAL BANK
• Ulmenstrasse 30
P.O. Box 17 41 26
6000 Frankfurt 17,
West Germany

CHEMICAL BANK
190 Avenue Charles De Gaulle
92523 Neuilly-Sur-Seine
Paris, France

NOTES should be surrendered with all coupons appertaining thereto maturing on or after the date fixed for redemption, failing which the face value of any coupon not so delivered will be deducted from the sum due for payment.

Any amount so deducted will be paid against surrender of the said coupons within a period of 10 years from January 6th, 1986. On and after the date fixed for redemption, interest on the notes will cease to accrue.

Dated at City of Toronto this 29th day of November 1985.

GENERAL MOTORS ACCEPTANCE CORPORATION OF CANADA LIMITED

These securities having been sold,
this announcement appears as a matter of record only



Crédit d'Équipement
des Petites et Moyennes Entreprises

U.S. \$100,000,000

10 1/8 per cent. Guaranteed Notes Due October 25, 1991

Unconditionally Guaranteed by

The Republic of France

Issue Price 100%

Citicorp Investment Bank Limited • Banque Nationale de Paris

Algemene Bank Nederland N.V. • Arab Banking Corporation (ABC)

B.A.C.—C.O.B. Savings Bank • BankAmerica Capital Markets Group

Bank of Tokyo International Limited • Banque Bruxelles Lambert S.A.

Baring Brothers & Co., Limited • Caisse des Dépôts et Consignations

Commerzbank Aktiengesellschaft • Credit Commercial de France

Credit Lyonnais • Daiwa Europe Limited

Generale Bank • Goldman Sachs International Corp.

Kuwait International Investment Co. s.a.k. • LTCB International Limited

Morgan Stanley International • Nomura International Limited

Orion Royal Bank Limited • PK Christiana Bank (UK) Limited

Smith Barney, Harris Upham & Co. Incorporated

Swiss Bank Corporation International Limited

Union Bank of Switzerland (Securities) Limited

October 1985

CITICORP INVESTMENT BANK

Heavy rainfall causes loss for A Monk at midway

The Guinness Peat offer:
four good reasons to say no.

NO 1.

The offer represents a price earnings multiple of only 9.3.

NO 2.

The offer would reduce shareholders' dividend income by almost 20%.

NO 3.

The offer is below the current market price.

NO 4.

The offer ignores our 1985 forecast of total profits of at least £27m.
It is simply an attempt to buy Britannia Arrow on the cheap.

Britannia Arrow

Sign nothing. Reject the offer.

No 1 IS BASED ON THE CASH ALTERNATIVE OF 130p AND BRITANNIA'S FORECAST TOTAL EARNINGS PER SHARE FOR 1985 OF AT LEAST 14p.
(THE DOCUMENT INCORPORATING THIS FORECAST WAS POSTED TO BRITANNIA SHAREHOLDERS ON 13TH DECEMBER 1985; FURTHER COPIES ARE AVAILABLE FROM BRITANNIA ARROW HOLDINGS PLC AT 80 COLEMAN STREET, LONDON EC2).
No 3 IS BASED ON THE MIDDLE MARKET QUOTATION AT THE CLOSE OF BUSINESS ON 11TH DECEMBER 1985.

THIS ADVERTISEMENT IS PUBLISHED BY LAZARD BROTHERS & CO., LIMITED ON BEHALF OF BRITANNIA ARROW HOLDINGS PLC. THE DIRECTORS OF BRITANNIA ARROW HOLDINGS PLC ARE THE PERSONS RESPONSIBLE FOR THE INFORMATION CONTAINED IN THIS ADVERTISEMENT.
TO THE BEST OF THEIR KNOWLEDGE AND BELIEF (HAVING TAKEN ALL REASONABLE CARE TO ENSURE THAT SUCH IS THE CASE) THE INFORMATION CONTAINED IN THIS ADVERTISEMENT IS IN ACCORDANCE WITH THE FACTS. THE DIRECTORS OF BRITANNIA ARROW HOLDINGS PLC ACCEPT RESPONSIBILITY ACCORDINGLY.

TECHNOLOGY

Geoffrey Charlish reports on a big city teleshopping project

Prestel brings back the grocer's 'boy'

THOSE OLD enough will remember the pre-war "grocer's boy" who would deliver your weekly groceries in a wicker basket from the front of a heavy-weight bicycle.

Those days are coming back, with the difference that the cycle becomes a delivery van and the housewife goes nowhere near the shop, using instead a keyboard and television set to order from an "electronic supermarket."

Telecard Holdings, which raised £500,000 in a recent over-the-counter flotation, is joining Laidlaw Foods, the supermarket chain, to bring a Prestel-based supermarket "tele-shopping" service, complete with same-day delivery, to five London boroughs. More than 3,500 items will be on offer.

The service, Telecard Super-shop, goes on line before Christmas. It is thought to be the first commercial big city supermarket service based on a national videodata system, although both Gateshead and Bradford councils are operating ROCC Computers systems in private videodata supermarket schemes. These, however, are aimed at the disadvantaged and are run as a social service.

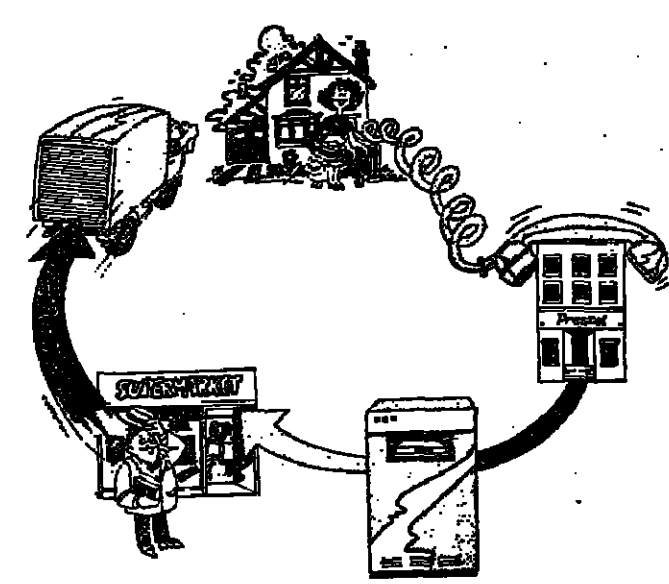
In addition, Littlewoods, the Nottingham Building Society, Great Universal Stores and others have teleshopping and mail order services.

The Telecard move could be a turning point for Prestel, which until now has mainly carried services that appeal to segments of the population like software buffs or investors.

Prestel got off to a shaky start in the mid-70s when it was wrongly assumed that large numbers of householders would connect their television sets—at considerable expense—to interactive information services over British Telecom lines.

Most people stuck to Coronation Street and Prestel turned instead to the business community and other specialist groups, where there has been considerable success, particularly in the travel trade. Mr Graham Jones, general manager, says that 1985-86 will be Prestel's first profitable year.

Prestel should not be confused with teletext, which simply sends text, numbers and rudimentary graphics one way over the air using the two televisions. Prestel, however, is a two-way system, without interfering with the programmes. There is no



charge, but a TV set equipped with teletext decoders is needed. Prestel works both ways over a phone line, allowing the user to react to what he sees and send instructions or data back to the controlling computer. He asks for specific information to be sent to him and may have to pay for it.

With Telecard Super-shop, the user simply dials the service, enters an identity number and password and then keys single digits to obtain the pages that give codes for routine products, special offers or new products. When the shopper can bring up the ordering page and fill in the codes. Product name, size and price immediately appear.

The shopper enters the quantity for each item and is given an on-screen running total of what has been spent as the

order builds. The last item ordered can always be amended and if something is out of stock an alternative is suggested by the computer, which the user may accept or reject.

If the order is placed between midnight and noon, it will be delivered during the same day, otherwise on the following day. Orders can be placed 28 days in advance. They can also be placed from any Prestel station outside the service area, provided delivery is within the area.

Delivery will be by radio-controlled vans operated by Moves, the London delivery service. Super-shop customers pay the driver by cheque. Later direct-debiting systems will be considered.

The service is starting in the City of Westminster and the London boroughs of Camden,

Kensington and Chelsea, Hammersmith and Fulham, and Wandsworth. It is believed there are already some 8,000 Prestel users, business and domestic, in the area, which contains a total of 380,000 households and about 12.8 per cent of London's resident population.

More to the point perhaps, is the fact that these households spend about £75 a week on food and drink, whereas the average for London is £46.

So Telecard has chosen its ground with care. If all goes well, expansion into a further nine London boroughs is planned, followed by other parts of the UK.

The cost of entry and use is not thought to be a big stumbling block in the areas chosen. For those already on Prestel, the service is free apart from the cost of the phone call.

The package, Assassin 6, is the latest version of a package ICI created in the early 1980s and has been improving ever since.

It was designed to make possible the simple retrieval of information from unstructured data. As long as the data are entered in a recognised electronic format—word processor output, for example—Assassin will file, organise, edit, annotate, send and retrieve them.

It uses a search technique called "inverted files" where every section, paragraph, sentence or even individual words in a document can be indexed so that they can be retrieved at high speed.

ICI originally wrote the package to assist its own technology to find information in scientific databases. In Assassin 6, it has created a version directed towards commercial applications and with a host of features aimed at making it easy for lay people to use.

Mr Hector McLean, personnel and management services director for ICI's agricultural division—which encompasses Associated Knowledge Systems, the company ICI set up to market Assassin—said that the company could not hope to understand

Assassin unlocks door to software technology

THE COMPLEXITY of the modern computer software market is well illustrated by the announcement last week that ICI, the UK-based computer manufacturer, is to market a powerful and well-regarded information retrieval package written by ICI.

The result will be that ICI mainframe users will have access to software technology hitherto available only to IBM and Digital Equipment (DEC) users.

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all the various commercial sectors which could make use of Assassin.

Earlier this year it signed a marketing agreement with Digital Equipment which could be worth £40m over five years. It has now signed a software agency agreement with ICI.

The products are marketed by ICI's sales force to the mainframe customers in return for a 20 per cent commission on sales.

The conversion of Assassin to run on ICI mainframes under its flagship operating system VME (an operating system is a large computer program that controls the working of the computer) was carried out by Pinpoint, a small, specialised software house based in south London with expertise in data handling and analysis.

It already holds an exclusive licence on DEC hardware for Assassin 6. As well as converting Assassin to ICI code, Pinpoint will provide first level support for users of the text retrieval package.

One of the principal aims of the venture is to make an impression on the local authorities in Britain. ICI has a significant share of this market both for hardware and software. Pinpoint has a long history of analyses and studies carried out for local authorities.

Mr Gurmukh Singh, Pinpoint's managing director, says the first local authority to use Assassin under the new arrangements will be Islington, already an ICI showpiece.

Assassin costs, typically, £20,000. There are some 40 Assassin 6 sites in the UK and more than 100 installations of all versions of the package.

ALAN CANE

Automatic information exchange

COMPANY TELEPHONE exchanges are still called FAXES, but a better title for the systems now emerging from the major manufacturers might be FAXX, or private automatic information exchange.

The latest offering from GEC Reliance, for example, called ISLK, is able to support voice and data communications using digital networks. Advanced data facilities with IBM compatibility are provided, with integrated voice messaging, where stored, spoken messages can be heard by the called party when he returns to his office after an absence.

Making full use of the available standards, ISLK is thought by GEC to be the only FAXX able to support interstate, local desk-to-desk and, in the near future, high speed local data communications.

The company is committed to the 64,000 bit per second data channel standards, but it realises that this is "simply too slow for many applications such as file transfer between workstations and minicomputers."

It is developing a system to work at 2.5m bits/sec, enabling its Mosaic intelligent workstations to communicate at high speed over normal telephone wiring. Then, such services as word processing, electronic mail, telex (and the higher speed teletext), business graphics and X25 packet transmission will become available.

GEC has also gone a long way to accommodate the IBM environment found in so many companies. For example a plug-in board allows the IBM PC and its compatibles to be connected to through the FAXX and there is also a coaxial cable eliminator that links IBM 3178 and 3276 terminals to their cluster controllers over telephone wiring.

More on 0633 225086.

Genetic 'fingerprint' may aid crime fighters

FORENSIC SCIENTISTS are excited by a new biochemical technique that could provide a foolproof way to track down criminals using traces of blood or other fragments of body material such as hair or nail clippings.

In the technique, samples containing genetic material obtained from the scene of a crime are analysed to produce a pattern representing the concentration of the different compounds in the material. The pattern, which looks similar to a bar code of the type that appears on packaged goods, is specific to an individual.

Scientists could match a pattern obtained from a sample with a similar representation of genetic material from a suspect. In this way, researchers in forensic laboratories could obtain virtually unassailable evidence against criminals.

The technique originated with work by Dr Alec Jeffreys at Leicester University. Workers at the Home Office's forensic science service are testing the method.

Dr Vivien Emerson, deputy director of the service's central research establishment at Aldermaston, said the technique looked particularly promising. He said he hoped it could be introduced as a routine part of the forensic service within a few years.

The method starts with the addition of certain enzymes (proteins which catalyse specific biochemical reactions) to a trace of blood or semen, or piece of human tissue such as skin. The enzymes split into small gene fragments the long strands of deoxyribonucleic acid (DNA) present in the sample.

The different components are separated by an electrophoresis technique. In this, fragments of genetic material are channelled in a solution past electrodes.

Depending on the electric charge on the fragments, they move in different paths and can be collected. At this point,

radioisotopes are attached to different components in the sample to serve as radioactive "tags."

Measuring the radiation indicates the concentrations of particular DNA components obtained from the sample, a reading which is turned into a bar code by a photographic method.

Every person would have his or her own bar code which identifies the individual due to the specific nature of the original genetic material. In forensic work, the only time the technique would break down is if identical twins

(whose DNA chains are the same) were suspected of the same criminal offence.

According to Dr Emerson, the chemical procedure to produce the bar codes is by no means easy.

The technique could, however, replace the standard method of detecting criminals by samples of blood. In this, scientists examine the liquid to see if it matches the blood group of suspects. The method provides no more than a general guide on the grounds that possibly hundreds of suspects could share the same group.

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PETER MARSH

Research chair sponsored

SCHLUMBERGER, oil-services and electronics concern, is to sponsor work in engineering software at Imperial College, London. The company is to pay £254,000 over five years to enable the college to recruit a professor to work in this area along with assistants.

The cash is coming from Schlumberger Measurement and Control, based in Gräf-

feld. Work at Imperial College will examine new software techniques for use in areas such as computer-aided testing, design and measurement.

Schlumberger recently opened a £20m research laboratory in Cambridge and has other UK development centres in Reading, Farnborough, Exeter and Farn-

Company Notices



Following the DIVIDEND DECLARATION by the Company on 10 October 1985 NOTICE is now given that the following DISTRIBUTION will become payable on or after 16 December 1985.

Gross Distribution per Unit 3.50 cents
Less 15% USA Withholding Tax 0.525 cents

Converted at \$1.4975 2.975 cents
= \$0.01866444

Claims should be lodged with the DEPOSITARY, National Westminster Bank PLC, Stock Office Services, 20 Old Broad Street, London EC2, on special forms obtainable from that Office.

United Kingdom Banks and Members of The Stock Exchange should mark payment of the dividend in the appropriate square on the back of the certificate.

All other claimants must complete the special form and present this at the above address together with the certificate(s) for marking by the National Westminster Bank PLC. Postal applications cannot be accepted.

DATE 6 December 1985

U.S.\$125,000,000
CELANESE MEXICANA, S.A.
(Organised under the laws of the United Mexican States)
Six Month Notes Issued in Series under a

U.S.\$125,000,000
Note Purchase Facility

Notice is hereby given that, by an amendment dated 13th December, 1985 of the Note Purchase Facility Agreement dated 20th October, 1981, the above Notes may be issued in series of up to \$125,000,000 in aggregate principal amount and that such Notes will bear interest at the rate of 1 1/2 per annum above LIBOR at the date two business days prior to the purchase of such Notes. If payment of all or any part of the principal of or interest payable on such Notes is not made when due, interest will accrue at the rate of 1 1/2 per annum above LIBOR as determined on the business day immediately succeeding the due date.

16 December, 1985
Citibank N.A.
as Agent

GOLD FIELDS OF SOUTH AFRICA LIMITED
(Incorporated in the Republic of South Africa)
(Registration No. 05/04181/06)

CONVERTIBLE REDEMPTIBLE PREFERENCE SHARES

Dividend No. 3 of 145 cents per preference share for the six months ending 31 December 1985 has today been declared in South African currency payable to preference shareholders registered in the books of the company at the close of business on 24 December 1985. Warrants will be posted to preference shareholders on or about 26 December 1985. Preference shareholders may obtain the payment of dividends at the share transfer offices and the London Office of the company. Requests for payment of the dividend in South African currency by members on the United Kingdom register must be received by the company on or before 24 December 1985 in accordance with the above mentioned conditions. The register of members of the company will be closed from 25 December 1985 to 3 January 1986, inclusive.

By order of the Board
per pro CONSOLIDATED GOLD FIELDS PLC
London Secretaries, Mrs G. M. A. Gledhill, Secretary
United Kingdom Registrar
Hill Samuel Register Limited
6 Grosvenor Place
London SW1P 1PL
London Office:
31 Charles II Street
St James's Square, London SW1Y 4AG
12 December 1985

INVITATION TO BID

REPUBLIQUE ISLAMIQUE
DE MAURITANIE

Fonds National de Développement (FND) BP : 648 - Nouakchott
Avenue Gamal Abdel Nacer - Immeuble APARCO - Mauritanie
Télex: FND 840 MTN
Téléphone: 533-46-535 12

FND intends to finance a number of OCEAN FREEZING STERN TRAWLERS to be exploited by Mauritanian ship owners in Mauritanian waters (North-West Africa) for deep sea fishing of cephalopods, shrimps and other demersal species.

FND—a development bank—herewith invites interested firms to submit bids for (10) ten OCEAN FREEZING STERN TRAWLERS having the following characteristics to be delivered in 1986.

—Gross tonnage: about 270 GRT
—Overall length: 35 metres
—Depth: 3.60 metres
—Breadth: 8.5 metres
—Main engine power: 1,000 HP
—Speed on the order of 10 knots
—Fish hold: Capacity: 160 tons fish hold to be maintained at temperature of -25°C
—Freezing capacity: 8 tons per day provided by at least two independent tunnels
—Two independent refrigeration systems
—Accommodation for crew: 18 to 24 men
—Fresh water capacity: 46m³
—Fuel capacity: 100 metric tons or at least 45 days cruising range
—Fishing gear, winches and nets to fish deep sea species (cephalopods, shrimps, other demersals)
—Two auxiliary engines
—Two generators 150 kVA each
—Standard safety, navigation and fish localisation equipment according to "Bureau veritas" specifications
—Trawlers can be:

(a) all new
(b) all secondhand not exceeding 6 years of age
(c) some new and some secondhand not exceeding 6 years of age
—Trawlers should be classified by "Bureau veritas" or have an equivalent classification
—Secondhand trawlers and their main parts should have certificates of expertise from "Bureau veritas" or Lloyd's. They should be maintained in good condition
—Bids should include maximum information on trawlers and their parts; specifications as well as drawings and photographs for secondhand boats
—Engine and other main equipment should be from the same manufacturers for all 10 trawlers
—Financial arrangements should be included as well as timing for delivery and all other pertinent information and proposals
—Bids should be for trawlers ready to fish and cif Nouadhibou, Mauritania
—Bids should be submitted to FND at above address, no later than January 31 1986 for opening the same day
—Bids should be valid for at least 6 months from the date of bids opening
—References should be given on financial as well as technical capabilities of bidding firms and on their previous experience in the field of shipbuilding
—For clarification or additional information FND can be contacted at the above address
A 1% guaranty is required to be allowed to BID
—BIDDING DOCUMENTS can be obtained from the following addresses:

(1) FND: Immeuble APARCO, Avenue Gamal Abdel Nacer, BP.648 Nouakchott, Mauritanie
Télex: FND 840 MTN - Téléphone: 533-12/533-46 for the sum of 20,000 Ouguiya
(2) SNIM: 5 Rue Scribo, Paris 75009, France
Téléphone: 47-42-14-70 for the sum of 2,000 FF



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 - 1 campsite
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 - 4 travellers' refuge hostels

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- ★ Mixed investment company, with 49% of the capital held by the foreign partner, with the following principal benefits:
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In both cases, the management and marketing are to be provided by the foreign partner, who may repatriate the full amount of his remuneration.

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FINANCIAL TIMES SURVEY

Monday December 16 1985.

Defence Industries

The defence budgets of the major European governments are under pressure, and weapons are becoming much more expensive. Manufacturers are finding that collaboration to share costs is an increasingly important option.

Curbs start to bite

By Bridget Bloom
Defence Correspondent

WITH WORLD military spending now at some \$800bn and rising, it may seem perverse that the predominant theme these days among Nato governments—which account for some 40 per cent of that total—is the shortage of finance for defence.

Yet for the first time in nearly a decade, none of Nato's major European members is likely to achieve the 3 per cent real increase in its defence budget that was so confidently set as a target for the whole alliance in the last years of the US Carter administration.

A number, Britain included, will next year experience a decline in real terms in their defence budgets. Even in the US, where defence spending is likely to go on rising over and above the prevailing rate of inflation for the foreseeable future, the increases are already smaller than were planned only four years ago.

Inevitably in such a diverse alliance, the impact of more strained financial circumstances on the armed forces and on the industries which supply them varies as do the national remedies which are being tried to mitigate them. In the US, for example, the cry is currently for reform of the organisation of defence, including the defence procurement system which has made

possible the much-publicised provision to the armed forces of \$50 ashtrays and \$450 claw hammers.

In France, where defence industries are mostly nationalised and a highly-coordinated procurement system prevails, major projects are being cut. In Britain, where there is much talk of the probability of "salami slicing" of the defence programmes to make ends meet over the next few years, there is renewed emphasis on the value of competition as a means of increasing defence efficiency.

Themes

Internationally, there are common themes. The US is again putting pressure on its European allies to do more in their own defence while within Europe, partly in response to these admonishments, there has been a notable attempt by defence Ministers to increase the joint production of weapons systems.

The reasoning is that such cooperation will reduce unit costs by sharing research and development costs and lengthening production lines. Beyond that, however, there is talk of the rationalisation of defence industries. As the dilemma facing Britain's Westland Helicopters has shown, in Europe there are often too many manufacturers chasing too few orders, against efficient US competition.

These trends are now quite widely accepted as legitimate areas of concern. Even if observers may disagree on how serious the impact of the cur-

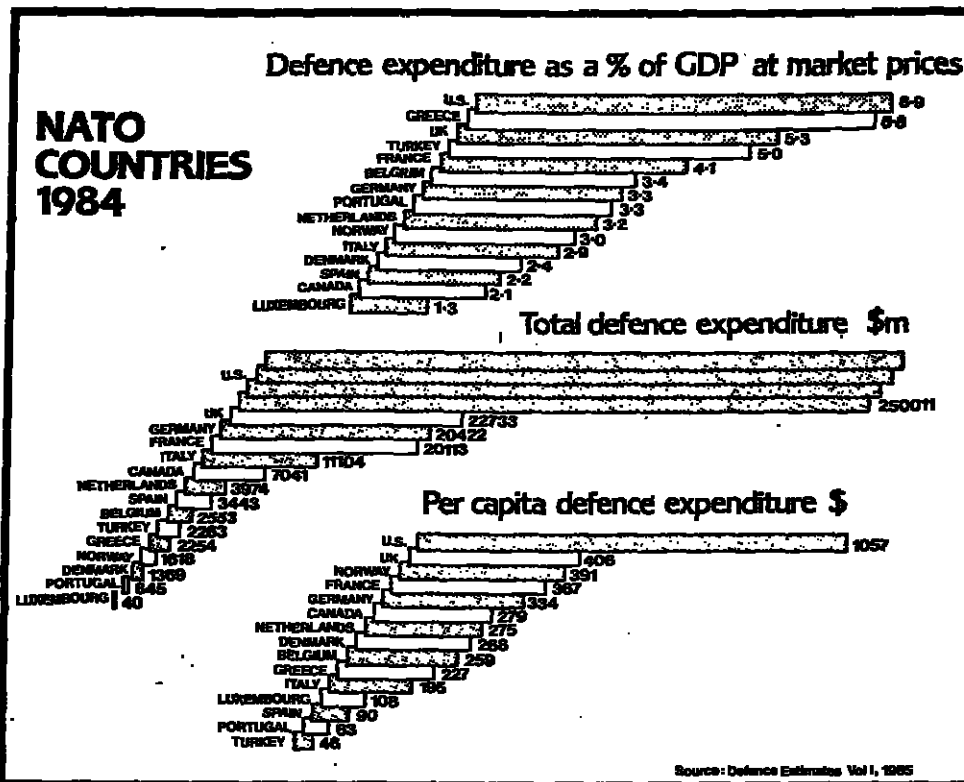
rent financial constraints might be on Nato's military readiness, there are few who deny that for Europe's defence industries the next few years are likely to prove a critical period.

The reasons for the strained financial circumstances within the 16-member alliance range from the effects of the recent recession, with governments now consciously opting to shift the emphasis towards social rather than defence spending, to problems specific to defence financing.

These include the increasing technological sophistication of weapons systems, as well as the disproportionate increase from generation to generation in the costs of defence equipment. In Britain, for example, a new "cheaper" Type 23 frigate is some 34 times more expensive than the Leander class warship of the 1960s which it will replace.

In financial terms, the situation is most dramatic in Britain, where after seven fat years in which defence spending has increased in real terms by nearly 20 per cent, the government has decided to "level fund" the defence budget for at least the next three years. Even the Defence Ministry acknowledges that this will mean a decline in spending in real terms of more than 1 per cent; independent estimates suggest a decline of some 6 per cent by 1988-89.

Mr Michael Heseltine the Defence Secretary has set his face against a drastic defence review, hoping to make savings through tougher contracting terms, but it seems certain



that many projects will be delayed as money gets tighter.

France's 1986 budget expects a modest increase of 1.7 per cent in real terms, but this follows three years of virtual stagnation and a spending squeeze is already having its effect on major projects. Plans to plug a gap in the country's air defences by the purchase of the US early warning aircraft AWACS have been scrapped, while the Army will get fewer tanks and helicopters than it expected.

Even France's nuclear deterrent is being affected, for while spending on its nuclear submarine fleet is being stepped up from 22 per cent to 34 per cent of the planned equipment budget next year (compared to Britain's estimated 11 per cent at its peak for Trident) plans to develop a new mobile strategic land-based missile look like being abandoned.

In Italy, where defence spending has long been a much lower proportion of GDP, the financial constraints are having a rather different effect. Industry depends greatly on its ability to generate exports, which now seem to have peaked. One result is the beginning of rationalisation of the country's defence industry base.

Response

A similar shift is noticeable in West Germany, with arms producers becoming bigger but fewer in response to pressures on the equipment budget which this year will increase by less than one per cent.

Europe's defence industries all depend heavily on arms exports; France was third in the world league table between 1978-83, with exports of \$16.7bn. The UK (\$8.5bn), West Germany (\$6.6bn) and

Italy (\$4.7bn) respectively were in fourth, fifth and sixth places.

Both France and Britain have registered some impressive agreements in the past few months to swell the 1985 totals—France is supplying 24 Mirage F1 fighters to Iraq and more recently, with the US company GTE, beating a British-US consortium to a \$4.3bn contract for army communications which over the next 20 years could be worth nearly \$80bn. For its part, Britain is negotiating a major deal to sell Tornado and other military aircraft to Saudi Arabia which could be worth some \$2.4bn.

The drive for exports, made more difficult in the past few years by the emergence of efficient third world producers like Brazil and Korea, will go on and will remain important for Europe's defence industries.

But the most marked change in the past year or two is the new emphasis which European politicians are placing on armaments collaboration as one way of lessening the impact of the declining resources available for defence.

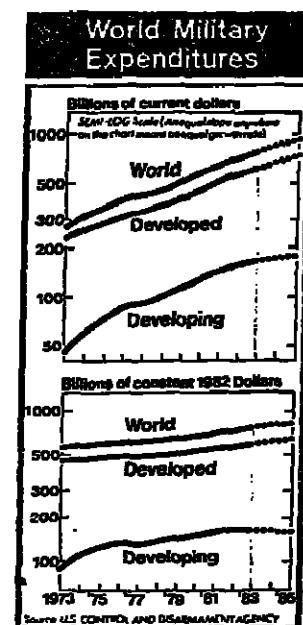
Arm collaboration, as sceptical industrialists point out, is not new in Europe, and its success has been only partial.

There have been some marked successes, particularly in military aviation, as articles elsewhere in this survey show. But the failure of France and the four EFTA partners to agree on a common requirement for a new fighter, and the present competing plans for helicopter production between Europe's four manufacturers illustrate the distance still to be travelled even in aviation.

Elsewhere, there are some reasonably successful projects—the multi-launch rocket system (MLRS) is an interesting example of industrial consortia competing for a collaborative project involving both European and the US governments. But there is also the disastrous self-propelled howitzer project, the SP 70. This is now, after nearly 20 years and expenditure of some £250m by Germany, Britain and Italy, about to be cancelled by the partner states.

The new impetus towards arms co-operation is intended to give collaborative policies greater coherence and more political momentum. Over the years, Europe has gathered a plethora of institutions designed to encourage arms collaboration, ranging from those within Nato itself, to the Western European Union and the body now chosen as the prime vehicle, the Nato-affiliated Independent European Programme Group (IEPG) which involves all Nato's European members including France.

Over the past 18 months, IEPG Ministers have held a series of meetings and drawn up a new charter on collaboration, defining a list of projects for future co-operation. The IEPG's guiding principles are that members must try to harmonise their requirements and timescales for new equipment,



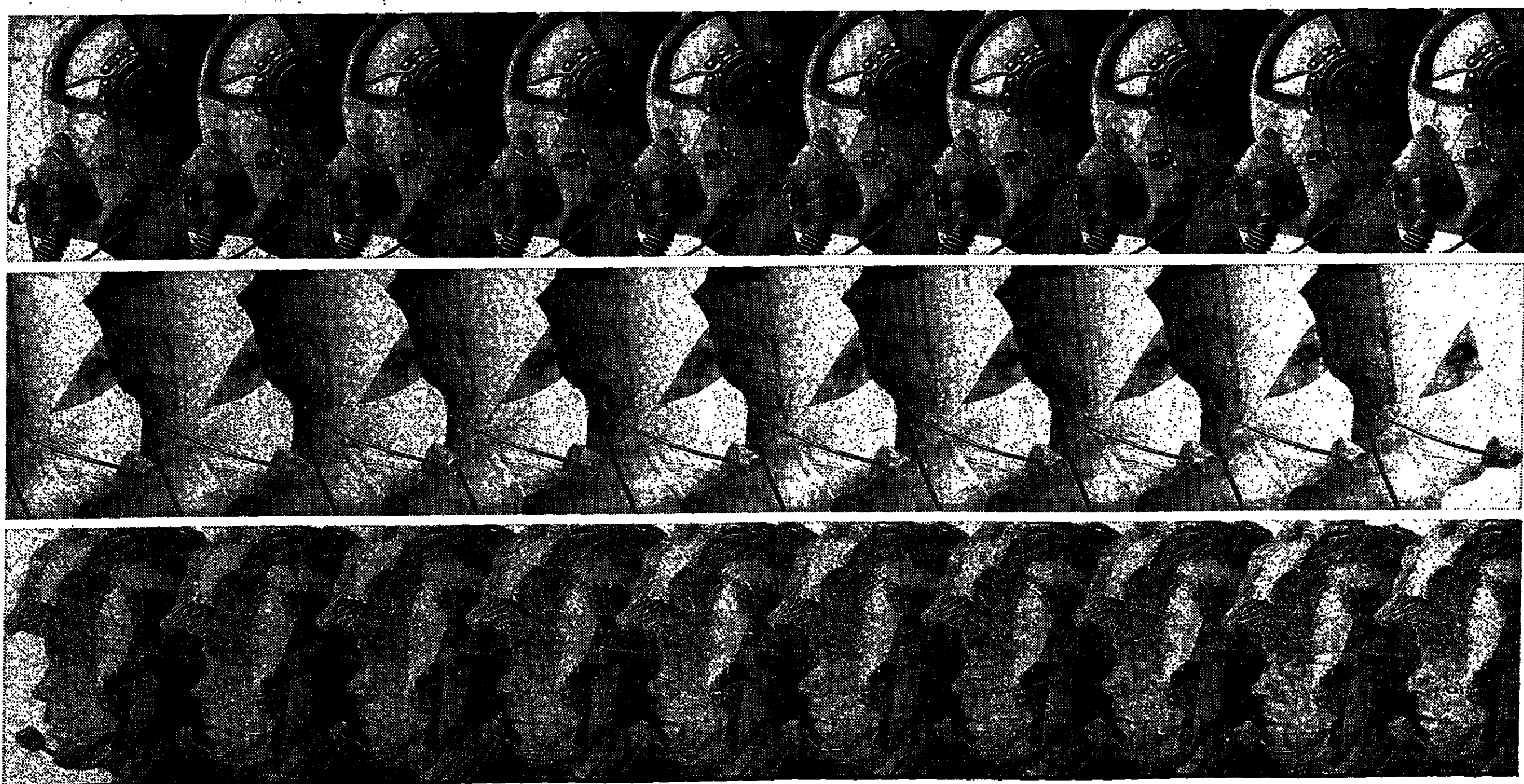
thus making it easier to move to common research and development programmes and ultimately to joint production.

The process is much easier to talk about than to carry through, as the EFA negotiations illustrate, but the Ministers' political interest is generally held to have added dynamism to the collaborative effort even if it has not yet resulted in new projects actually being started.

There is some proof of success in developments within the broader Nato context, where an effort is being made to harness the new drive towards collaboration on a Nato-wide basis. Lord Carrington, Nato's Secretary-General, sees armaments collaboration as a critical element in the alliance's attempt to improve its conventional defences—its part of an effort to diminish Nato's early reliance on nuclear weapons in a future war. Lord Carrington has been endeavouring to strengthen Nato's own machinery for planning the procurement of jointly produced weaponry—agrees which ironically have met with some resistance from France, Britain and Germany.

Part of the European governments' objection comes from fears that Nato—involving the US and Canada as well as Europe—could undermine Europe's own effort in the field. European worries, rarely stated outright, are that if Nato

CONTINUED ON PAGE 2



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Defence Industries 2

Competition and spending clamps worry manufacturers



BY BRIDGET BLOOM
NEXT YEAR for the first time in almost a decade there will be no growth in real terms in Britain's defence budget.

restored many of the most painful cuts intended for its surface fleet.

But the defence budget will actually decline in 1986-87 by about 1 per cent in real terms, with similar falls due in the subsequent two or three years. As nearly half of the budget is spent on equipment, the impact on Britain's defence industries could well be uncomfortable.

Figures published in last month's autumn statement show that next year the budget will be £18.52bn while those for 1987-88 and 1988-89 are put at £18.82bn and £18.89bn. The Defence Ministry, forecasting inflation of about 4 per cent for next year and subsequently of 3.5 per cent and 3 per cent, accepts that this will mean a decline in real terms of just under 1 per cent for 1986-87, 1 per cent for 1987-88 and some 1.5 per cent for 1988-89.

However, the House of Com-

mons Defence Committee, last summer predicted a possible decline of 6 per cent in real terms for 1987-88, principally because it believes that the Defence Ministry's assumptions on inflation and exchange rates, as well as on pay, will prove unrealistic.

The Committee also noted the inevitable pressures on future budgets of generation changes in the prices of defence equipment: the new Type 23 frigate, designed to be simpler and cheaper than its predecessor, will still cost 3½ times more than a 1960s Leander frigate while the air defence version of the Tornado fighter-bomber will be 175 per cent more expensive than the earlier Lightnings.

Precisely what the declining defence budget will mean for industry in the coming year will be known only after Christmas, as detailed procure-

ment budgets for the three services are agreed. Mr Michael Heseltine, the Defence Secretary, has taken a conscious decision to curb (he calls it level fund) defence spending. He hopes to mitigate its effects by a three-pronged drive to increase efficiency within the MoD.

This involves an attempt to induce greater competition in defence contracting, the privatisation or "contracting out" of areas of Defence Ministry or armed services' activity to private enterprise and the encouragement wherever possible of collaborative or joint production of weapons systems between British and European industries.

Added to these measures is what Mr Heseltine calls flexible planning—effectively a refusal to commit funds to projects until it is obvious that they can be afforded.

He has set his face firmly against a defence review of the sort attempted by Sir John Nott in 1981, but has insisted that he will not cut back on any of the major roles Britain performs, such as fielding a large surface navy in the eastern Atlantic or maintaining up to 55,000 troops in West Germany.

Instead the Defence Secretary is expected to indulge in what his service chiefs call salami slicing—paring back the budget from year to year, delaying the start of major and minor projects and slowing down their implementation rather than cancelling them outright.

Such tactics are likely to prove troubling for Britain's defence industries, already smarting under the new competition policies which are being pursued with added vigour by Mr Peter Levene, formerly head of United Scientific Holdings, who was appointed by Mr Heseltine last March to be the new Chief of Defence Procurement.

Mr Levene is a firm believer in competition and a dedicated opponent of the system which governed so much of the MoD's business in the past—the so-called cost plus contract—where a contractor produced below initial MoD estimates: some £30m was "saved" on a contract of about £160m for RAF training aircraft, and about £180m was "saved" on a £750m contract for armoured vehicles.

While industry has publicly

welcomed the new emphasis on competition, there are fears that the government will be coming too dogmatic, particularly in relation to the competition policy and to that on collaborative, which industry believes should be determined by market pull, not political push.

Especially disliked by industry is the MoD's decision in principle to open main production contracts to competition, rather than award them automatically to the company which has been responsible for development, as in the past.

More broadly, industrialists point to a conflict between the

new drive to encourage British companies to compete as "UK Ltd" in export markets, while at the same time opening up certain sectors of the UK market to foreign companies in the name of competition.

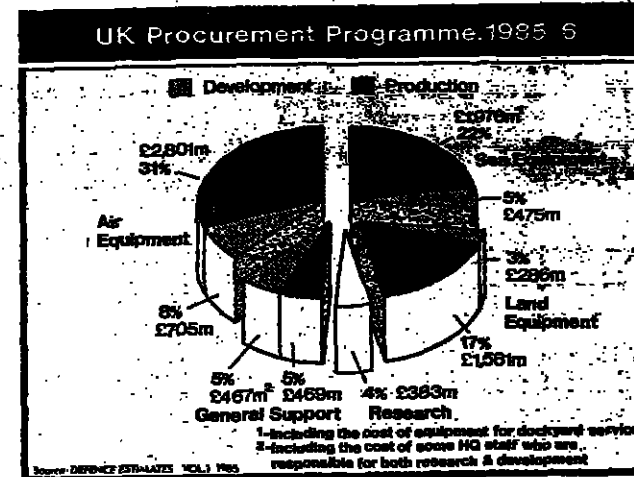
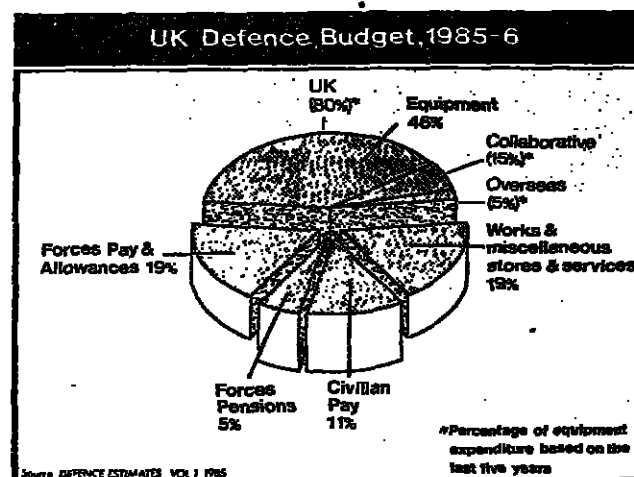
But the principal fear in industry is that the measures being applied by the Ministry will not be enough by themselves to tailor defence spending to the reduced defence budget and that despite Mr Heseltine's assurances more drastic action will be needed.

Over the next few years, for example, the Trident project with its high dollar content

comes to a peak at the same time as funds must be found for the new European fighter aircraft, while decisions must be taken on whether or not to replace Britain's ageing amphibious landing ships.

A host of smaller but still key projects could also prove vulnerable, ranging from an impressive array of new weapons for the RAF to communications equipment for the Army.

In the prevailing gloom, however, one bright spot emerged from last month's figures. Spending on the Falklands, totalling £550m this year, will decline to £192m in 1986-87.



The UK defence budget in detail

	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86
Total expenditure	9,176	11,162	12,607	14,412	15,487	17,832	18,000
Expenditure on personnel	3,912	4,556	5,058	5,455	5,726	5,957	6,271
Pay, etc. of the Armed Forces	2,099	2,460	2,728	2,914	3,076	3,195	3,330
Retired pay, etc. of the Armed Forces	459	503	524	560	577	591	606
Pay, etc. of civilian staff	1,354	1,593	1,706	1,961	1,973	1,981	1,975
Expenditure on equipment	3,640	4,885	5,628	6,297	6,939	7,796	8,355
Sea	1,110	1,513	1,624	1,730	1,849	2,222	2,451
Land	740	904	1,101	1,353	1,475	1,705	1,847
Air	1,427	2,959	2,458	2,640	2,657	2,304	2,306
Other	363	410	456	574	558	565	551
Other expenditure	1,625	1,741	1,910	2,659	2,822	3,280	3,423
Works, buildings and land	599	622	664	822	1,067	1,358	1,441
Miscellaneous stores and services	1,026	1,118	1,246	1,827	1,754	2,022	1,982
Total expenditure at constant (1975-76) prices	5,243	5,421	5,498	5,822	5,914	6,270	6,538

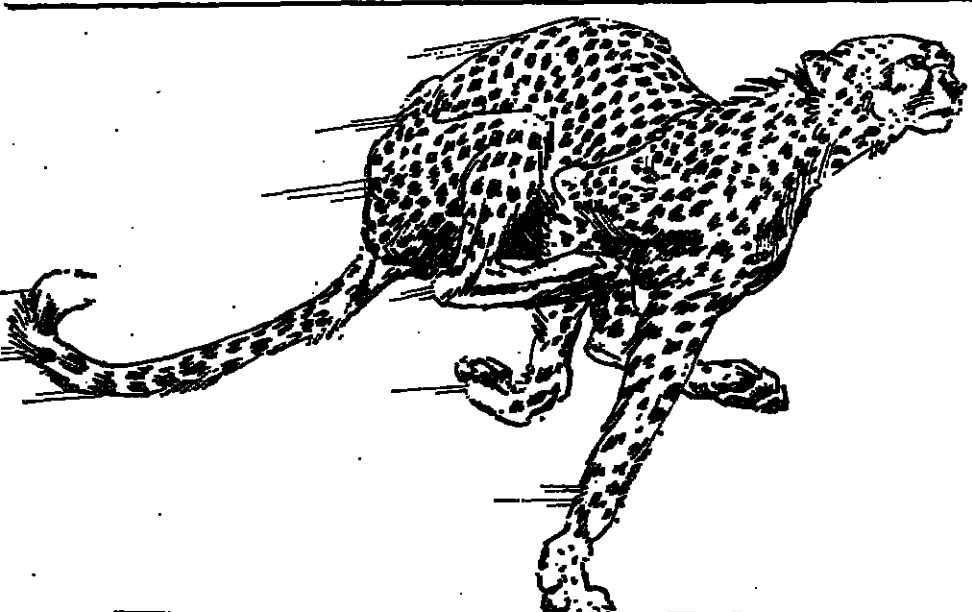
Figures derived from the original Supply Estimates for 1984-85. Current forecast outturn at constant 1975-76 prices is £6,168m.

† Outturn and Estimates given at outturn and estimates prices respectively.

Source: Defence Estimates Vol 2 1985.



Michael Heseltine: he is firmly against a Nott-style review and is likely to delay projects rather than cancel them



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£50m-£100m
Austin Rover Group
Dewey Group
Hunting Associated Industries
Philips Electronic and Assoc.
Industries

£25m-£50m
General Motors
Lucas Industries

MOD payments to UK-based contractors

(payments of £5m or more for equipment in 1983-84)	
Marshall of Cambridge (Eng.)	Dunlop Holdings
Pilkington Bros	Flight Refuelling (Holdings)
Short Bros	Guest Keen and Nettletons
Smiths Industries	Harland and Wolff
United Scientific Holdings	Hawker Siddeley Group
Vickers	Remploy
£10m-£25m	Singer Co. (UK)
Acrow	STC
British Electric Traction Co.	The Throgmorton Trust
BTR	UKAEA
Cable and Wireless	Weir Group
ICL	£5m-£10m
ITM Offshore	BICC
Northern Engineering Indus.	B. Thompson
Oerlikon Bueche Holdings	Engelhard Industries
Cossey Electronics	
Cambridge Electronic Indus.	

Ferguson Industrial Holdings
Goodyear Tyre and Rubber
Graham Lion
Louis Newmark
MacTaggart Scott (Holdings)
Portsmouth Aviation
Rank Organisation
RCA
RFD
Saft (UK)
Schlumber Measurement and Control
Siemens
S. Pearson and Son
Systems Designers Internat.
Thomas Tilling
Vauxha Group
Western Scientific Instruments
Wilkinson Sword Group
Yarrow

Source: Defence Estimates Vol 1 1986.

CONTINUED FROM PAGE ONE

is made the major focus for collaboration, Europe's industries will again find themselves playing second fiddle to more powerful US companies. A generally unstated but critical aim of European defence Ministers is that collaboration within Europe should strengthen Europe's industries' chances of competing with the US.

The so-called "two-way street" issue has been a sensitive one for many years, as successive efforts to improve the imbalance in defence trade between the US and Europe have met with only patchy success. Over the last decade or so the US has on average sold seven times more defence equipment to Europe than it has bought from it.

Today efforts are again being made in Washington to correct this state of affairs. Mr Caspar Weinberger, the US Defence Secretary, recently sent directives to the US armed forces' procurement authorities to examine collaborative projects to supply their needs where possible. In addition, two amendments to the 1985 Appropriations Bill, by Senators Nunn and Quayle, aim respectively to increase the number of common research projects between the US and Europe, and to ease the legal restrictions on collaboration which are embodied in the US Arms Export Control Act.

It may be a considerable time before the impact of Europe's current financial problems works through into a recognisable pattern for the Continent's defence industries. But a sign of times to come may well be found in a year-long study which has just been set up by the 15 IEPC defence Ministers.

Working with very little publicity, for obvious reasons given the subject's political and economic sensitivity, a dozen eminent industrialists and former diplomats are to recommend ways of rationalising Europe's defence industries. That seems bound to mean major changes as the industries themselves attempt to become more efficient and more competitive.

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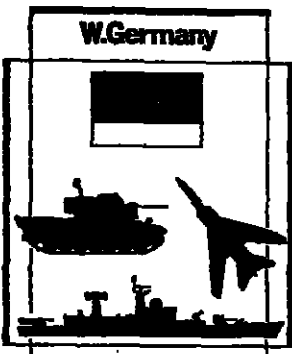
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Defence Industries 3

Bonn eager to collaborate



W.Germany

IF THE West Germans are as worried today as they were a few years ago by fierce US pressure on its allies to raise their defence spending a real 3 per cent a year, they hide it well. Bonn's defence budget, just over DM 50bn for next year, represents a real increase of under 2 per cent, but, says Mr Manfred Woerner, the Defence Minister: "We are all falling behind. Not only us, but the Americans themselves."

"I am not convinced it is a good measurement," he said during a recent interview. "I would not want to renounce it as long as I have no replacement but what we need are more detailed measurements, or more convincing yardsticks for effective combat power."

"What we are measuring with that 3 per cent is only the money we put in, not the output. I need DM 2.5bn or DM 3bn less per year with my conscript army than I would with a professional army."

It is difficult to say how much of that saving finds its way into the hands of the West German arms industry which, though numbering up to 36,000 suppliers, is relatively immature, having had to start from scratch about 30 years ago.

One result is that Bonn is probably the most eager participant in the collaborative weapons projects that now dominate European defence procurement. Of total spending on arms, some 70 per cent involves at least one partner in another country and it is probably a safe bet that the other 30 per cent is concentrated in the hands of a very few chosen domestic suppliers.

The industry is itself being tested by a variety of forces. Mr Woerner himself is under very strong pressure from the Finance Ministry to hold spending down. Although a record

DM 12.2bn has been allocated to Bolkow-Blohm (MBB) and procurement next year, it is a rise of only 0.9 per cent.

In addition, the Defence Ministry has begun to impose a strict value analysis programme in its dealings with industry, saving between DM 50m and DM 60m a year on practice ammunition, a one-off saving of DM 100m after insisting on changes in the manufacture of sea-bed mines and a further DM 60m saving was achieved after deciding to stop ordering "military" cranes and simply buy standard commercial ones instead.

The lack of new technologies, which would otherwise encourage defence planners to find money for increased procurement, are often not available. Plans to build a new main battle tank to replace the Leopard II, by the end of this century are on the backburner, says Mr Woerner, because no existing technology would so improve upon the present tank that it justifies the expense of setting up a new programme. Cost cutting has also become a by-word in the major collaborative projects where manufacturers one relied on the politicians to be so keen not to damage a joint project (and therefore sour political relations between capitals).

The parliamentary budget committee in Bonn has recently frozen funds for the British, German and Italian SP 70 self-propelled howitzer because of disastrous cost overruns and Mr Woerner says he is fighting to maintain the original cost ceiling on the Franco-German PAH-2 anti-tank helicopter being built by Messerschmitt-

Bolkow-Blohm (MBB) and Aerospatiale. The French partner, he says, wants to lift the funding limit.

West German arms manufacturers are beginning to respond to these pressures, quite predictably, by deserting their individual fiefdoms and joining forces with each other. The arms producers are becoming bigger and fewer.

Dornier, the country's second biggest aerospace group after MBB, now belongs to Daimler-Benz, as does the electronics group, AEG, which does a sizeable business with the military. Daimler has also bought full control of MTU, the country's largest jet engine maker, this year.

MBB itself sought to buy Krauss Maffei, prime builder of the Leopard II tank, earlier this year. The cartel authorities said no but Krauss Maffei nevertheless ended by being bought by a consortium in which MBB will have a major managerial role.

Blohm and Voss, West Germany's biggest producer of surface warships, is poised to buy a large part of the Howaldtswerke-Deutsche Werft (HDW) a major submarine builder.

Krupp MaK, chief engine supplier to the Leopard tank programme, has said it is looking for an "industrial partner" probably another supplier of heavy diesels and it is not unlikely that MTU's diesel business will prove to be the right home.

Mr Woerner says he is not alarmed by this new concentration of production. On the contrary, the movement could

actually increase competition because it strengthens some of the weaker producers.

Dornier is a case in point. Before it was taken over by Daimler-Benz it was riddled with management inefficiencies, but under a powerful new wing will probably prove a far more effective competitor for MBB.

There is also no doubt that the Government for all its free market principles, would not hesitate to protect its interests in a strong domestic arms industry. Krauss Maffei was bought after the British tank producer, Vickers, showed an interest in acquiring it. The German establishment, including the Defence Minister, moved heaven and earth to ensure that it stayed in German hands — tank technology being probably the only area in weapons manufacture where the Germans can claim to be a major world force.

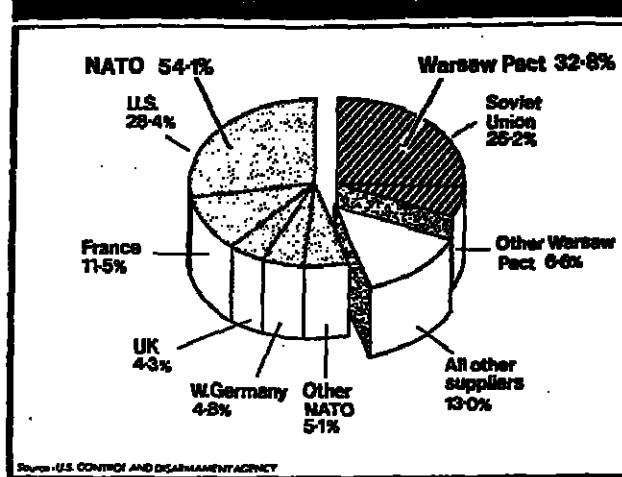
And provided the industry shouts loud enough, the Government listens. That happened earlier this year when Bonn decided, after years of prevarication, to buy an American airborne identification system (IFF), instead of a supposedly more sophisticated system developed by Siemens. By the time the uproar had died down, a compromise quietly emerged under which the cheaper American system would be "modified" (although to what extent is difficult to say) with German companies winning some business.

In one sense though, the arms industry in Germany has not yet even begun to fight. History has largely prevented West Germany from becoming a major arms exporter, leaving the country's manufacturers often with little more than vicarious profits when, for example, the British sell the German, British and Italian Tornados to Saudi Arabia. But the Government of Chancellor Helmut Kohl has set about easing export restrictions. What is missing is a breakthrough.

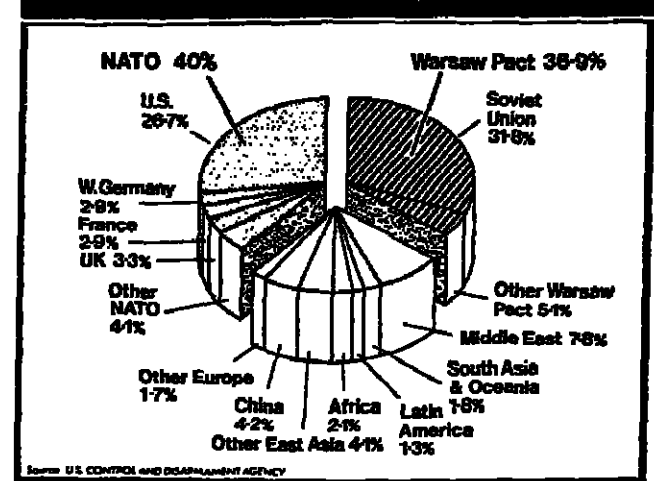
A provisional DM 7bn order from Saudi Arabia for a munitions plant, placed with German companies, could prove to be the key to manufacturers' exporting ambitions. Bonn, with an eye on the Israelis, has not said yes, officially, but it seems likely that it will, and that the contract will go ahead.

That one order would dwarf the country's DM 2bn annual arms exports revenue outside Nato and could change the face of the industry. It is up to the politicians.

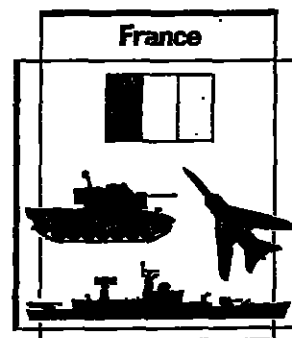
Share of World Arms Exports, 1983



Share of World Military Expenditures, 1983



Rising costs put on the squeeze



France

recent developments in military technology have shown up weaknesses in French defence systems.

Thus the government is expecting to invest more heavily in space technology as a result of US and Soviet advances in SDI. It is planning to spend more to strengthen the penetration capacity of French nuclear missiles. And it is under pressure to speed up the replacement programme of the army's long-range artillery.

The result of this has been that some ambitious programmes have already been scrapped. It is now virtually certain that France will abandon its project for a mobile strategic (SX) missile system even though it is recognised that the existing long-range nuclear missiles on the plateau d'Albion are vulnerable to Russian attack.

The government has given up the idea of purchasing Boeing's AWACS early warning aircraft even though it is recognised that there is a large gap in France's air cover in the South Eastern and Mediterranean area. There are also likely to be fewer tactical nuclear missiles built and their delivery could be postponed beyond the scheduled date of the early 1990s.

At the same time, deliveries of the Mirage 2000 to the Air Force have been slowed down and the Army is getting fewer new helicopters and tanks than it had expected. Inevitably, budgetary stringency has also cut into spending on fuel and ammunition with the result

that exercises and training programmes have been cut.

The one area that has been exempt is expenditure on the nuclear deterrent. Thus the strategic submarine force which absorbed 22 per cent of planned equipment expenditure for the Navy in 1980 will absorb 34 per cent next year with the building of a seventh nuclear submarine.

Dissatisfaction with this situation among the armed forces has begun to spill out in public. Thus Gen Philippe Arnold commanding the first armoured division, told journalists last month that his budget for training and exercises had been cut by 17 per cent in 1984 and 8.5 per cent this year.

He complained that the French tank force was inadequate, saying that some of his tanks dated back to the 1960s and he would not receive the new AMX-30 B2 for another two years. He was subsequently relieved of his post.

This grumbling has not spread to the defence industries where exports help to make good the shortfall in purchasing by the armed forces. The turnover of the French defence industries rose by 14 per cent last year to a record FF 98.3bn. Of this, 43 per cent went to exports (also a record proportion) confirming France in her position as the world's third-largest arms exporter after the US and the Soviet Union.

Export orders gathered by the arms industry during the first six months of this year totalled only FF 10.7bn or well

down on last year's level. But this performance picked up dramatically in the autumn with the sale of 24 Mirage F-1 fighters to Israel—helping to carry the export orders total to FF 21bn by mid-September.

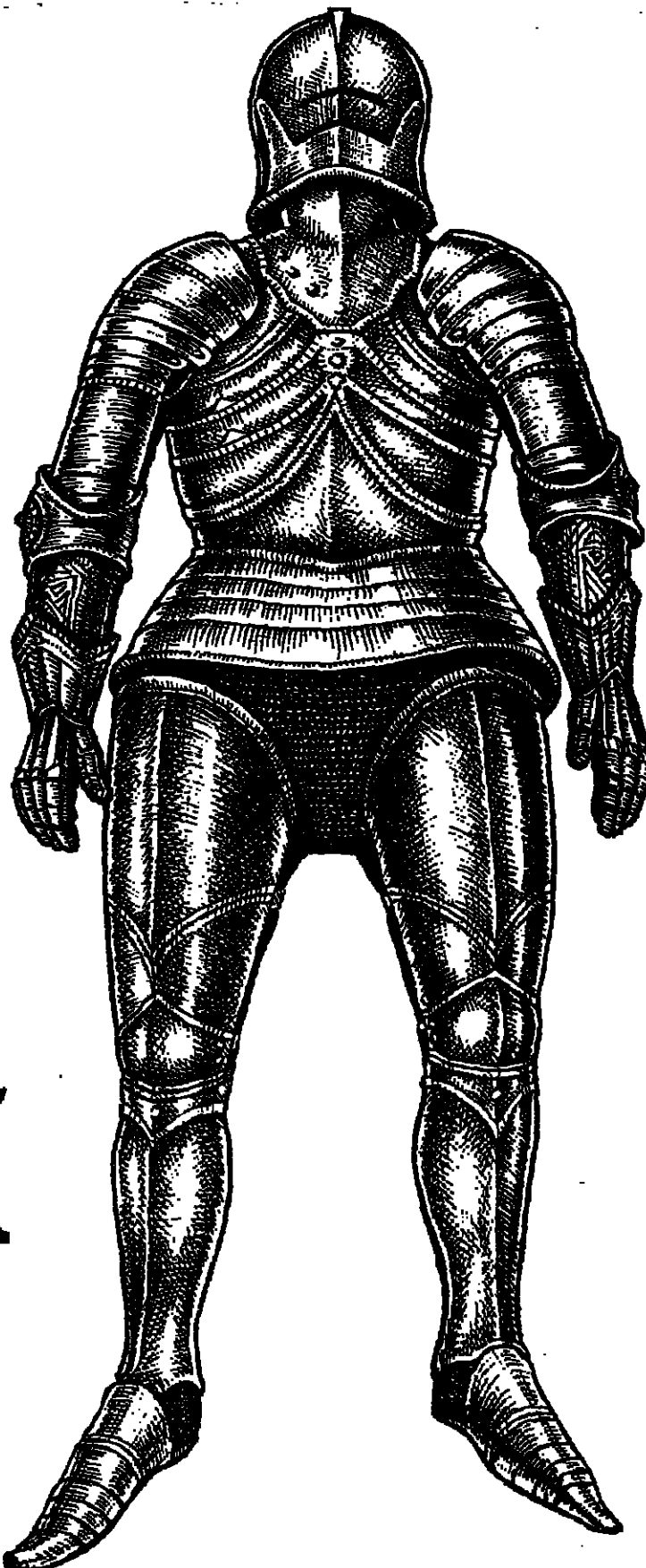
In the wake of this Thomson-CSF, in collaboration with GTE of the US, won a \$4.5bn order from the American armed forces for the French-designed RITA (Rassemblement intégré de transmissions automatiques) battlefield communications system.

Of this, Thomson's share is about \$1bn. The major disappointment to the French was the loss of the Saudi aircraft order to the Panavia consortium and the decision by France's European partners to opt for a new European Fighter Aircraft in preference to the Dassault-Breguet designed Rafale.

The French lobbying to get the Rafale adopted as the new European fighter aircraft is indicative of the close links between the government and the French defence industries. There is no system of competitive tendering in France such as Mr Michael Heseltine, the British Defence Minister, is trying to introduce in Britain. Equipment is conceived and designed in collaboration between the armed forces and equipment suppliers—but with a strong eye on export potential.

This tie-up has become even stronger since most of the defence industries including Dassault and Thomson were brought under state control in 1982.

AT LAST, BODY ARMOUR MOVES OUT OF THE DARK AGES



FACT: More than two-thirds of all fatalities and injuries in combat are caused by fragments of exploding artillery shells, grenades and other explosive devices.

FACT: The use of fragmentation vests which cover about 60% of the critical body area can reduce casualty figures by 30%.

FACT: The development of a remarkable fibre called KEVLAR® has made the production of truly effective and economic soft body armour possible.

FACT: KEVLAR is an aramid fibre with a tensile strength five times higher than that of steel wire and three times that of nylon at equal weight.

FACT: Due to its high strength, KEVLAR delivers protection with low weight and bulk penalties.

FACT: By 1988 more than 1.2 million fragmentation vests and two million helmets incorporating KEVLAR will have been issued to the U.S. Army, Marine Corps, Army Reserve and the National Guard.

FACT: Fragmentation vests have also become standard issue for troops in many other countries around the world.

FACT: Superior weaving optimises the ballistic properties of KEVLAR. Through an intensive programme of continuing development and testing, Fothergill Engineered Fabrics Ltd., a British company, have become one of the largest and most experienced quality weavers of KEVLAR in Europe.

FACT: Fothergill Engineered Fabrics Ltd., a subsidiary of Fothergill & Harvey PLC, manufacturers of a wide variety of defence products, have their own firing range where samples of woven KEVLAR are subjected to the most rigorous quality testing.

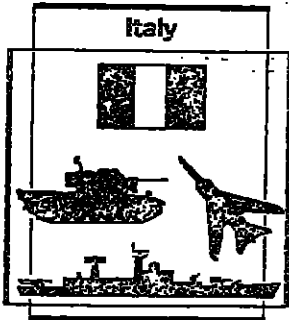
CONCLUSION: The modern soldier needs soft body armour in KEVLAR for maximum protection.

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Defence Industries 4

Increasing need to sell arms to Nato countries



BY JAMES BUXTON

ITALY'S DEFENCE industry is reorganising itself. It needs to make a greater impact on the market provided by the Nato countries to offset the decline of its once-strong outlets in developing countries.

The country's defence industry has grown remarkably fast in the past 15 years. Though about half the size of its UK counterpart — it accounted for 5.6 per cent of Gross Domestic Product in 1982, against Britain's 11 per cent — it is a big exporter: about 70 per cent of its output was exported in 1982, against 42 per cent for the UK.

And over the 1978-82 period no less than 96 per cent of Italy's arms exports went to

countries outside the OECD, compared with 83 per cent for Britain.

These statistics, based on a study by Prof Michele Nemes of the Centre of Defence Studies at Genoa University, point up the basic difference between Italy and other big Nato countries: it has only a small defence budget, being one of the lowest spenders on defence as a proportion of GDP in Nato — and there is only a small domestic defence market, estimated at \$1.45bn in 1983, against the UK's \$6.53bn.

The industry comprises much of the country's aerospace manufacturing, a good part of its shipbuilding industry, some of its vehicle manufacture and a big munitions and weapons sector. It employs about 80,000 people, and has found some important niches where it is a leader: in small ground attack aircraft (Aermacchi), fast, heavily-armed frigates (the Lupo and Maestrale, built by Cantieri Navali Riuniti) and electronic counter-measures (Elettronica).

However Italy's arms exports appear to have peaked. Having grown steadily from £2,100bn in 1980 to £4,500bn in 1983, they declined to £3,900bn last year, a drop in real terms of about 15 per cent. It had become



clear two to three years ago that the falling spending power of Opec countries and the constraints imposed by the IMF on the economies of other developing countries meant a much less rosy future for the Italian defence industry.

Further, arms producers such as Italy which operate particularly in Third World markets face growing competition from rising producers such as Spain, Israel, Brazil, South Korea and South Africa, West Germany and

Japan, more sophisticated producers, are in a position to challenge established manufacturers as they gradually lose their political shackles.

For Italy, there is no easy answer to these challenges, but the first step, which is widely recognised, is that the industry should be better co-ordinated, both at the level of government and of the companies themselves. Mr Giovanni Spadolini, the Minister of Defence, has made an important innovation by creating a committee that

unites leaders of the defence industry, both public sector and private, with the Ministries responsible for both defence and for industry.

To co-ordinate the industry itself is more difficult than might appear to an outsider. The greater part of Italy's defence industry is controlled by IRI and EFIM, the state industrial holding companies. But that does not necessarily make for co-ordination, since the different defence companies under them represent the political interests of com-

The Agusta A129 MongOOSE anti-tank helicopter (left) is at the centre of the company's concern about the future of Westland, the troubled UK manufacturer. Agusta has sold 60 A129s to the Italian Army and is to work on an improved version for the British Army, which would be developed and built jointly with Westland. The Italian maker is part of a three-company European consortium which may make a bid for a 30 per cent stake in Westland.

peting parties or factions. However in the past two years a fair degree of co-ordination has taken place.

Oto Melara, part of Efim, has made an agreement with Fiat, the vast private sector group, to co-ordinate in building a new battle tank for the 1990s and a heavy eight-wheeled armoured car mounting a 105 mm gun. This means that the companies which between them are Italy's only makers of armoured vehicles are in effect united.

Italy's two main makers of

missiles, Oto Melara and Selenia, the latter belonging to IRI-Stet, have formed a consortium which will co-operate in new projects in the field of missiles. Meanwhile, Elmag, part of IRI-Stet, is to work on sub-aqua systems with the Fiat subsidiary Giardina Whitehead.

Agusta, Efim's aerospace company, which is best known for its helicopters, is leading a consortium of public and private sector companies to bid jointly for projects under the US Strategic Defence Initiative.

Concentration has also occurred within the private sector alone. Fiat is now the effective leader of the Italian munitions sector. In 1983 it took a controlling 25 per cent interest in Seta RPD, the country's biggest munitions company, and also bought Italy's two private sector makers of mines, Valsella and Misar.

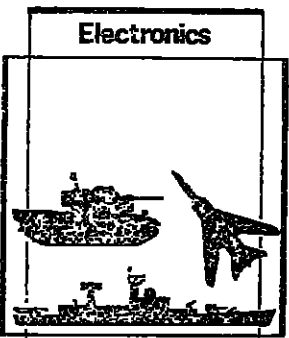
But there are important areas where rationalisation has not occurred: aerospace and aero-engines. Aeritalia, the airframe and aerospace offshoot of IRI-Finmeccanica, is a bitter rival of Agusta, which comes under Efim. Their interests overlap, if not clash, in subsidiary fields such as light attack aircraft. But reorganisation cannot of itself bring in sales contracts. It will be interesting

to see how two big collaboration ventures between Italian and other Nato companies fare. The first is the European Fighter Aircraft, where Italy is a partner with Britain, West Germany and Spain. The others are good, mainly because the core of the project is the Panavia consortium, which functioned successfully to build the Tornado, thus giving Italy its first big boost as a Nato defence contractor.

The other collaboration is between Agusta and Westland of the UK in the field of helicopters. The two companies are working jointly on the EH 101, a large naval helicopter for both military and civil use, which is designed to meet the needs of the Italian and British navies in the 1990s.

They are also working on feasibility studies for a new version of Agusta's A 129 MongOOSE anti-tank helicopter, to meet the requirements of the British Army. The further development of the A 129 is very important to Agusta's future. But the serious financial problems of Westland have cast something of a cloud over the collaboration of the two companies, though Britain insists that the future of Westland is not in doubt.

Major projects taking longer



BY JASON CRISP

DEFENCE and the electronics industry have always had a very close relationship, and if anything they are becoming more interdependent than ever.

Aircraft which can be flown only with the help of a computer, highly-sophisticated communications systems, detection and surveillance equipment all depend on the electronics industry and have an increasingly important role to play in the world's armed forces. Between 20 and 30 per cent of the electronics industry's output is estimated to go to defence.

The complexity of electronics and the associated software is bringing new headaches to the military as major projects take much longer and cost much more than even the most pessimistic prediction.

But as the worldwide slump continues for the electronics industry — from components to computers — the manufacturers look increasingly nervous about signs of government cutbacks in military spending. It is not surprising that so many companies have been keen to participate in the US Defence Department's \$26bn Strategic Defence Initiative or Europe's Eureka project.

One of the most important, and fiercely-fought contracts, for electronics equipment was to supply the US army with a battlefield communications system. Last month the Pentagon announced that Thomson-CSF of France together with its US partner GTE had won that contract worth \$4.3bn with the Rita system.

It was the largest US military contract ever placed with a foreign supplier. The decision was a double blow to Plessey of Britain which at one time

had high hopes that its system, Pirmigan, would win. Not only did Plessey's bidding with Rockwell of the US — not win but it was also seen to have made a much more expensive offering price of \$7.4bn.

The price differential was embarrassing to the British because the Prime Minister intervened earlier this year by writing to President Reagan to press Plessey's case. The decision inevitably will affect prospects for the two rival systems in other export markets.

It has also led to a Government investigation into the price of Pirmigan as Plessey has substantial orders worth more than £700m to supply Pirmigan to the British army — and there is considerable subcontract work in it for other UK defence electronics groups.

Plessey has argued with some success that the British army has not been overcharged for Pirmigan. It has pointed out that the system accounted for less than 40 per cent of the cost of the bid, made jointly with the Collins division of Rockwell.

In addition, its second generation battlefield communications system has been sold to Australia, New Zealand and other countries. However, Racal has recently won a development order for a battlefield communications system from the Australian defence force expected to be worth £100m eventually.

Public rows over very expensive delays on torpedoes (which rely on highly sophisticated electronics work at a sufficiently early warning aircraft, have appalled Government Ministers and contributed towards the MoD's move to fixed-price contracts.

Nimrod is now at least five years behind schedule and GEC is still having great problems making the highly sophisticated electronics work at a sufficiently high performance. Nimrod will cost the British significantly more than if the RAF had bought the American AWACS as it originally wanted.

The problems of Nimrod illustrate both the difficulties of managing such highly complex projects and the problem of deciding whether to re-invent a product which already exists in a proven form. The RAF, which probably will have to wait until 1990 for a full squadron of Nimrods, can have little doubt that its first choice was the right one.



IN AN IDEAL WORLD WE WOULDN'T BE IN BUSINESS.

Since the Second World War Europe has been left divided. Millions in Eastern Europe have come under Soviet domination. ■ At the same time the greatest array of conventional weaponry ever amassed is currently deployed throughout the Warsaw Pact. And pointing this way. ■ 24 hours a day. Three hundred and sixty five days a year. ■ The comparison between NATO and the Warsaw Pact's capabilities in conventional weaponry makes bleak reading. ■ On the Central Front in Europe, they have over two tanks to every one of ours, nearly

three artillery weapons to every one of ours. And against fixed wing tactical aircraft we're outnumbered two to one. ■ Fortunately, however, weight of numbers has never been an absolute guarantee of supremacy. ■ On many occasions throughout history the combination of political will, technological inventiveness and military skill has proven better than sheer might. ■ Consequently, having an effective and competitive British manufacturer of conventional arms and rocketry is fundamental to maintaining our basic freedoms and way of life. ■

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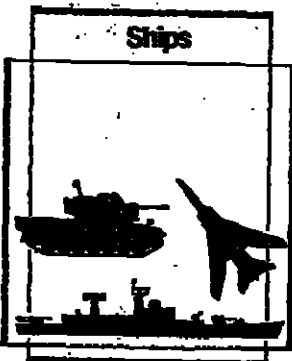
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Defence Industries 5

UK yards face a tougher future



BY ANDREW FISHER

THESE ARE exciting times for Britain's shipbuilding yards. But the future will also be tougher and more commercially demanding, as they cope with changes in their ownership and in the attitude of their main customer, the Ministry of Defence.

The return of the shipbuilding yards to the private sector is taking place as part of government policy to sell off assets at a profit.

While the merchant yards remain state-owned, and continue to lose money in the harsh world shipbuilding climate, the shipbuilding yards are being sold off to companies or their management and employees. All naval yards are keen to build up export business, though international competition is fierce.

One small yard and two large ones have already been sold, the

prices obtained surprising those who handled them. General Electric (GEC) paid £24m for Yarrow, the frigate builder on the Clyde, while a management team acquired Vosper Thornycroft in Southampton for about £18m, with institutional backing.

The small Brooke Marine yard in Lowestoft went for a much more modest £100,000 plus 1 per cent of the value of certain future contracts it has to win. Handling the sales for the government and British Shipbuilders, the state-owned parent, has been Lazarus, the UK merchant bank.

The surprise came from the fact that the prices were so high. For under the closer ministerial scrutiny to which defence contracts are being subjected—greater value for money being the aim—shipbuilding yards will have it less easy in future.

Still to be sold are Vickers Shipbuilding and Engineering (VSEL), of which Cammell Laird is now a part, and Swan Hunter on the Tyne. It seems highly likely that a team of present and former executives will take Swan Hunter, which now concentrates on naval ships after withdrawing from the more fraught merchant sector.

The Vickers yard at Barrow-in-Furness, Cumbria, is by far the largest, building nuclear and conventional submarines as well as armaments. A price of about £70m has been mentioned within the industry.

But much will depend on how



Devonport dockyard, where the Government hopes to save money on refits by bringing in private management. Unless strongly opposed this but the full privatisation of shipbuilding yards has been going ahead with little controversy

the cost of a 230m covered submarine building facility is treated. Able to handle several submarines at once, it will be ready for the Trident nuclear submarine programme. If a future Labour government cancels Trident, equivalent non-nuclear work is expected to be provided.

A problem for the UK yards is that naval orders are not awarded by the Ministry of Defence in batches of several at a time that would provide their builders with an assured workload for a number of years. This would increase efficiency and lower costs to the benefit of both sides.

Budgetary constraints and bureaucratic caution ensure that this does not happen in Britain, though US yards are used to building a run of vessels rather than one at a time. So while the yards have been criticised, and often rightly so for failing to match the productivity standards of the merchant yards, their faults are not entirely of their own making.

At the start of this year, the government handed out two

long-awaited frigate orders worth £140m each. One of them was a clear lifeline to Cammell Laird on Merseyside, which had been suffering from industrial action, but whose remaining workforce had crossed picket lines to get to work.

Under the wing of Vickers, Cammell Laird now has a future much more secure than seemed possible a year ago. Like Scott Lithgow, sold by BS to Trafalgar House last year, Cammell Laird had run into difficulties in the building of rigs for offshore drilling and exploration.

BS has now pulled out of that sector and Cammell Laird, with its modern facilities, is now firmly in the market for more frigate and non-nuclear submarine work. While Vickers is highly profitable, making a trading profit of nearly £18m in the 1984-85 financial year, Cammell Laird is still firmly in the red.

At Vosper Thornycroft, a possible £350m frigate order from Pakistan has been under negotiation for some time. The deal would involve one ship being built in Karachi and two in the UK. But Vosper is up against stiff West German competition.

It was disappointed not being included in the frigate orders that went to Swan Hunter and Cammell Laird. At present, it is building mine-detecting ships of glass-reinforced plastic for the Royal Navy and fast

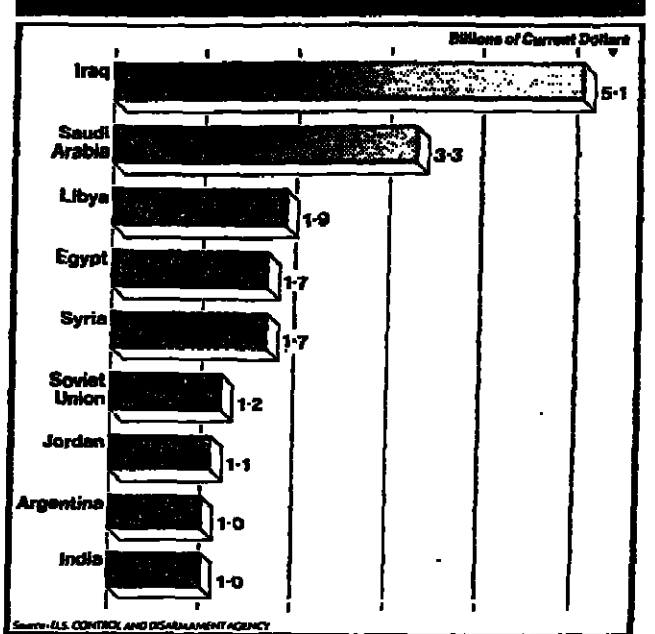
patrol craft for an unspecified foreign navy, as well as refitting frigates for Indonesia. GEC's purchase of Yarrow was aimed at giving it a stronger foothold in a major part of its defence equipment business: the supply of electronics and electrical components for the control systems and weapons of modern warships. These account for about half the cost of today's complex naval vessels.

To match the increasing complexity of warship design and construction, yards are investing heavily in computerised techniques. Vickers spent £8m on computers in 1984 and spending is continuing at this rate. The building of separate sections of the naval defence field is the government's intention to put the management of the naval dockyards into commercial hands. The dockyards at Rosyth in Scotland and Devonport, Plymouth, are basically the Navy's garages for complex refits and repairs.

Plenty of UK companies have shown an interest in the idea which would leave the assets in state hands. But implementing the policy could be an uphill task, as unions are adamantly opposed.

So while the government's target of privatising the shipbuilding yards by April 1986 looks like being achieved, that of privatising the dockyard management a year later may well not be.

Leading Arms Importing Countries, 1983



Iran, Libya, Syria, India and Soviet Union supplied primarily by Western Pacific countries.

Surplus capacity brings problems

THE ARMED FORCES of the world continue to demand more and better weapons at a time when developing countries are building up their own arms industries.

This is taking export markets away from the traditional arms-producing countries of East and West and adding to their problems of surplus arms production capacity. These problems have been emerging for some time as nuclear weapon purchasing programmes bite into tight defence budgets in the US and in Europe.

Brazil and South Korea are two countries with emerging arms manufacturing industries, but several other countries also manufacture arms for their own use, including Israel, with an advanced capability in aircraft, missile and tank manufacture, and South Africa, which has had to develop its own capability in the face of an embargo on arms exports.

Many of these relatively recent arms producing countries have also found success with their own exports, taking further markets away from traditional US and European producers.

At the same time, the cost of conventional weapons programmes has continued to increase as technical advances opened new solutions. Examples include the growing use of laser beams to guide unpowered bombs onto targets and to align tank gun barrels, and passive detection systems for missiles and guns.

In the US, the Army has recently taken delivery of another example of a new armament that takes advantage of developments in high technology to make the weapon more cost effective than traditional solutions. This is its 10,000th 'laser guided Copperhead' artillery projectile. The Copperhead projectile is made by Martin Marietta of the US.

It is designed to be fired from an army gun in the direction of the target, probably a tank. Near the target, the Copperhead is guided down, to hit the target at its weakest and most vulnerable point, on the top.

The US Army is to buy more than 31,000 Copperhead projectiles from Martin Marietta by 1991.

In the US and Europe the problem of lost markets and the rising cost of equipment is compounded by much apparent duplication among manufacturers.

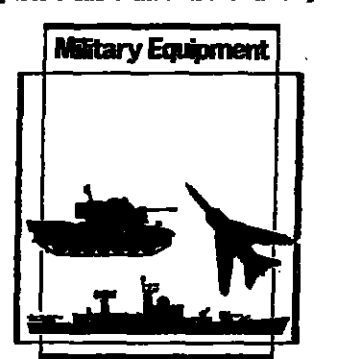
The NATO allies have more manufacturing capacity for main battle tanks than they have orders to fill the production lines.

The US is making the Abrams main battle tank; the UK is making the Challenger main battle tank; France is making its own AMX tank and West Germany is making the Leopard 2 main battle tank. Their existence, virtually alongside each other, illustrates how poorly the NATO allies have succeeded in drawing up agreed specifications for common main battle tank designs.

In the UK, the surplus capacity in the face of current market demand and the difficulty

of companies to win orders, is particularly acute. There are two large companies in the UK with factories designed to produce main battle tanks, Vickers Defence Systems on Tyneside and the Royal Ordnance Factory at Leeds. There is debate about whether the UK can justify retaining two tank factories.

The position in the heavy armoured fighting vehicle industry in the UK is likely to become clearer as the day approaches, next June or July, when the state-owned Royal Ordnance Company is prepared for its flotation on the London Stock Exchange and its complete transformation into a fully



BY LYNTON MCLEAN

commercial company away from its present role shareholder, Mr Michael Heseltine, the Defence Secretary.

In West Germany, there are also two companies engaged in making main battle tanks. In this case the Leopard series. Krauss-Maffei of Munich, the prime contractor for the Leopard 2 for the Federal German Army, Krupp of Kiel is also making the Leopard 2 for the Army.

The total order for 1,800 Leopard 2s for the German Army is expected to be completed next year.

The need to contain design, development and production costs in the military equipment industry has called for new design and procurement techniques, based on a so-called 'systems approach'. The aim is also to keep procurement costs to the minimum consistent with meeting design and operational parameters.

The systems approach is illustrated by the £17m Anglo-German-Italian Tornado multi-role combat aircraft and its associated weapons programme. The Tornado is both a fighter and bomber, and the equipment that enables it to carry out these roles has been designed from the outset to operate not as an appendage to the aircraft, but as an integral part of the so-called 'systems design'.

Tornado operates with the JP233 runway cratering bomb as a ground attack aircraft and with the British Aerospace Skyflash air-to-air missile as a fighter. Both armaments were designed in parallel with the aircraft.

However, even this technology is being overtaken by technical developments and changes in the perceived threat and the effectiveness of the aircraft.

ROYAL ORDNANCE: A NEW NAME FOR A 400-YEAR OLD COMPANY.

Early in her reign, Queen Elizabeth I initiated a fixed-price policy for defence supplies. Longbows were held at 6/8d and 3/4d (large and small sizes presumably). ■ However, the technology of the day was galloping ahead and bows and arrows were replaced with cannons and muskets. ■ And with them came the origins of today's Royal Ordnance. ■ In 1560 the Queen opened the Royal Powder Mill at Waltham Abbey, which remains an important Royal Ordnance centre for our present Explosives Division. ■ Over the centuries Royal Ordnance has created and manufactured the weapons which our forces have used with great effectiveness since the Armada, including the Crimea, The Great War, World War II, Korea, Aden, Suez, Malaysia, the Falklands. And many other campaigns. ■ Not surprisingly, during the last 400 years Royal Ordnance has grown both physically and technologically to meet the ever changing threat. ■

ROYAL ORDNANCE - THE FOUR DIVISIONS.

As technology has become increasingly sophisticated so the structure of Royal Ordnance has changed to meet the challenge. ■ Today the company comprises four divisions: Ammunition; Explosives; Small Arms; Weapons and Fighting Vehicles. ■ We are the largest producer of ammunition in Western Europe. Britain's major manufacturer of armoured vehicles, tanks and field guns. The leading producer and designer of small arms. And the UK's only integrated rocket motor producer. ■

A LONG HISTORY OF SUCCESS.

For 82 consecutive years the British Army has used Royal Ordnance's Enfield rifles. ■ In October this year they took delivery of the new Enfield Weapon System, with an initial order for 175,000. ■ We are manufacturing the Challenger main battle tank, its 120mm gun, ammunition systems and machine guns. It is now in regimental service with BAOR. ■ The US Army has bought our 81mm

mortar, which has a range between 100m and 5650m (that's 3 miles), and is testing our 105mm Light Gun. ■

Rocket propellants developed by us are sold around the world. In fact, we manufacture parts for most of the missiles in use with the British forces and many others besides. We are involved in almost every aspect of the UK's defence, from aircraft cannon, small arms, tanks and artillery to naval guns and underwater weapons. ■

THE FUTURE.

In July of this year Royal Ordnance formed a highly specialised group within the Royal Military College of Science called the Future Systems Group. ■ Its main purpose is to analyse the conventional weaponry needs of the armed forces 10-15 years hence. ■ Working alongside the Army's senior strategists and scientists on a day-to-day basis the group will help them define and ultimately produce the weaponry and rocket propellants which will be demanded by future situations. ■ The growth potential of all four divisions of Royal Ordnance is considerable.

■ Not only for sales to the British armed forces, but to those in America, in NATO and throughout the free world. ■ Over the last two years our sales and marketing efforts have increased substantially. We are pursuing prospects in over 60 countries. Our managers are working alongside designers and engineers at our 16 sites to produce the most advanced and efficient weaponry for all our customers' specific requirements. ■ Until such time as mankind can live peacefully, those of us who live out our lives in freedom need to maintain the effectiveness of our defences. ■ Our fragile freedom has taken hundreds of years to build, yet it could be lost in a moment unless we are properly prepared, as two world wars this century nearly proved all too well. ■ And that is why Royal Ordnance is in business.

ROYAL ORDNANCE
Defence systems, sub-systems and components

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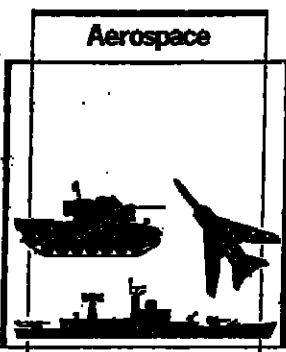
WalesCo is an open affiliation of 14 well-established companies in Wales capable of designing and manufacturing high-quality electronic and electro-mechanical products and systems for American and British governments, industrial and commercial applications. WalesCo also specialises in precision machining, chemical engineering and pneumatic/hydraulic control systems.

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Europe near full commitment on £20bn fighter



BY MICHAEL DONNE

THE BIGGEST single future programme now dominating the UK aerospace industry's thinking is the plan for the four-nation development of a new tactical combat aircraft to replace ageing Jaguars, Phantoms, Lockheed F-104s, Buccaneers and F-16 fighters — currently used in a wide variety of roles in Western European air forces. There are many other major military aircraft programmes under way in the UK. These include:

- Development and production of the advanced AV-8B Harrier II jump-jets for the RAF and the US Marine Corps, in conjunction with McDonnell Douglas of the US, involving 394 aircraft in all.
- The British Aerospace Hawk for the RAF and overseas air forces, and the US Navy under the VTX-TS programme, together with development of the Hawk Series 200 single-seat fighter venture by British Aerospace.
- Continued production of the Tornado multi-role combat aircraft itself for the tri-national (UK, West Germany and Italy) Panavia combine and for export to Saudi Arabia and Oman. All these military aircraft programmes are expensive, with Tornado so far the most expensive of all. But they are expected to be eclipsed by the new tactical fighter programme, called the EFA or European Fighter Aircraft.

The EFA, now moving through its Project Definition Phase, is expected to involve more aircraft in terms of

numbers than even the Tornado (up to 1,000 aircraft against the Tornado's 809), and to be even more expensive, perhaps as much as £20bn including research, design, development, and production. It will be spread across the four nations currently involved and reach into the mid-to-late 1990s and probably even into the next century.

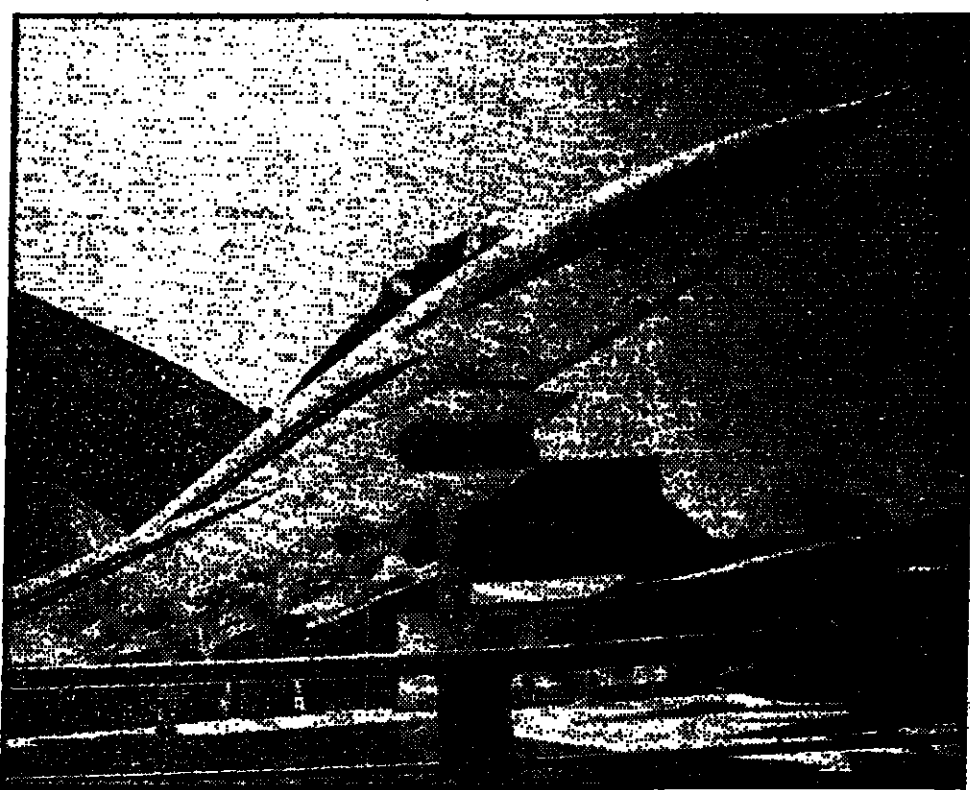
The EFA is designed to complement the Tornado in combat roles. Whereas the Tornado is a bigger, heavier aircraft with substantial strategic role (reaching deep into enemy territory on bombing missions, and ranging far out over the North Atlantic for the maritime defence of NATO's Western seaboard and approaches), the EFA is essentially a smaller, lighter aircraft for ground attack and air superiority over the battlefield.

It is intended to enter operational service by 1995, which means a start to full-scale production by 1991-92. This in turn means that it will have to begin its full development in the mid-summer of 1986, which means a full commitment by the four governments currently involved (the UK, West Germany, Italy and Spain) by that time.

The French were originally intended to be partners in the venture, but dropped out earlier this autumn when it became clear at a meeting of National Armaments Directors in Turin that the French ideas of a new tactical fighter did not coincide with those of the other nations.

As a result, the EFA consortium finally was drawn up to involve Britain, Germany, Italy and Spain, with the French deciding to go alone with their own venture, the Dassault-Breguet (Avion de Combat Experimental) now called the Rafale.

The French decision to go alone was due to the incompatibility of its ideas with those of the other nations—primarily because the French needed only a ground-attack aircraft, and not one that also incorporated air-superiority role that in the French Air Force is already performed by the



Mockup of the EFA aircraft. The four governments involved will have to make a full commitment by summer next year if the fighter is to enter service by 1995.

Mirage 2000 and Mirage 4000.

Subsequently, however, President Mitterrand of France has suggested that there might still be a French presence in the EFA, perhaps 5 to 10 per cent and that in return the four EFA nations might have some financial stake in the Rafale venture. It seems that President Mitterrand foresees both ventures being developed side by side but with some exchange of technological information.

At present, there seems to be no suggestion of the French dropping the Rafale to rejoin the EFA, and there is certainly no intention of the four EFA nations re-opening the long debate and accepting the Rafale as the new tactical combat aircraft for Europe.

Certainly it is being made clear privately in the UK aerospace industry that the French intentions will have to be spelled out in detail, and that there can now be no question of the four EFA nations changing their basic aircraft formula to suit French requirements; the debate on EFA, which took so long to resolve, is not about to be reopened. The French, if they come in at all, come in on the four EFA nations' terms.

For this reason, the four nations are now pushing ahead with the Project Definition of their own aeroplane, a process that is likely to last several

months, up to the late spring or early summer of next year. This involves determining the precise structure of the management organisations that will run the programme, on both the engine and airframe side; determining the precise parts of the aircraft that each national aerospace industry will undertake; and refining the current preliminary design (outlined in a European Air Staff Target, or EAST) into a firm requirement (a European Air Staff Requirement, or EASR).

This, in turn, will define in detail the performance characteristics of the aeroplane—its size, weight, speed, range, rate-of-climb, design shape, weapons payload and other requirements. From this, the aerospace industries of the four EFA nations can determine precisely how to build the aircraft.

Fundamentally, the industrial work division (and cost sharing) is 33 per cent each for the UK and West Germany, 21 per cent for Italy and 13 per cent for Spain.

The four EFA governments are insisting that this distribution is retained through the entire venture, across airframe, engine, avionics, equipment and weapons loads, although in the latter provision will be made for individual national "fits" of weapons to meet special requirements. The shares could be marginally adjusted to allow

for new entrants if necessary—the Dutch and Belgians are understood to be interested, and even the French could now still get some share.

But the primary manufacturers will be British Aerospace, Messerschmitt-Bölkow-Blohm, Aeritalia and Casa on the airframe, with Rolls-Royce, Motoren- und Turbinen-Union, Fiat Aviazione and Sener on the engine. How the avionics and equipment will be shared is more complex, in view of the much greater number of companies involved in these fields in the four countries, each of which is anxious for some share of the EFA.

At present, what is clear is that the EFA is a so far politically committed programme. Full-scale development go-ahead is expected next mid-summer, with the target of production from 1991-92, and an in-service date of 1995.

Past experience has shown that in all such military programmes, there are many political and technical hazards to overcome, and the EFA is not likely to be spared such hiccups.

But, on present indications, the programme is firm and rolling ahead, and if the desires of the aerospace industries are fulfilled, it will be eventually the biggest single military aircraft venture on the European side of the Atlantic this century.

Rise in joint programmes

DEMAND FOR missiles and guided weapons continues to dominate much of the high technology development in the military manufacturing sector, with expenditure on missiles and associated systems estimated at \$10bn a year for the rest of the decade.

The high cost of some individual programmes, and the identification of a common foreseen demand among allies of the North Atlantic Treaty Organisation, has led to collaborative programmes of unprecedented scale and complexity.

One of the largest recent examples is the programme to produce the multiple-launch rocket system with terminally-guided warheads (MLRS TGV) for Nato.

The cost of this programme is expected to run into billions of dollars if a decision is taken to move forward from the current development phase to put the system into mass production in the late 1990s.

The MLRS TGV programme is the result of a collaborative agreement between the US, UK, France and West Germany to develop a salvo-launched ground-to-ground rocket system. The rockets are to be capable of dispensing an undischarged quantity of warheads that towards the end of their trajectories can seek and destroy individual tank targets.

The \$90m contract from the US Army Missile Command for the co-operative development of the MLRS TGV was awarded to the MDTT Joint Venture, comprising Martin Marietta of the US, Thomson Brandt Armaments of France, Thorn EMI Electronics of the UK and Diehl of West Germany.

The contract includes options for a second and third phase of development which would bring the total contract value to the equivalent of approximately \$500m.

The special terminally-guided warhead to be developed for the multiple-launch rocket system is designed "to help to counter the Warsaw Pact's growing numerical superiority in armoured vehicles by permitting attacks in the enemy's second echelon divisions and beyond before they can be committed to the central battle," according to the US Pentagon.

The Pentagon says that since 1977, the "increase in the number of Warsaw Pact armoured vehicles has continued to outstrip Nato's capability to defeat them with direct fire weapons. The rocket system with its guided war-

heads will go some way towards replacing heavy guns with Nato armies and MLRS has become the centrepiece of Mr Casper Weinberger, the US Secretary of Defence's "emerging technology" (ET) initiative.

The first version of the multiple-launch rocket system, made to the US with LTV Aerospace Division as the prime contractor, and known simply as MLRS, is already in service with the US Army.

A second version, known as MLRS II, is being developed in the US and in West Germany, where the German Army is considering the weapon for use as a salvo-launched rocket attack system with scatterable anti-tank mines delivered at the end of its trajectory.

Mr Norman Lamont, the UK Minister of State for Defence,

expected to be whittled down to three systems for the US Army to evaluate. The requirement is for a system, either gun or missile-based, to shoot down extremely low flying helicopters at about 6 km to 7 km range.

British Aerospace has joined Norden, a subsidiary of United Technologies of the US, to promote the BAE Tracked Rapier ground-to-air guided missile system in the US to win the contract.

The total contract for this low level air defence system for the battlefield could be worth up to £20m and up to 300 Tracked Rapier systems could be involved.

The BAE Rapier system is in competition with the Franco-German Roland III anti-aircraft missile system. Boeing is bidding ADATS missile. Boeing is bidding the contract with its Avenger multi-purpose wheeled missile carrier, operating eight Stinger missiles.

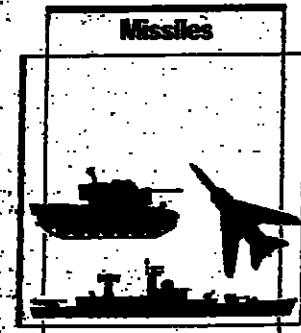
Bofors of Sweden is offering a combined tracked launcher for the RBS 70 laser beam-riding missile and a radar-guided gun. General Dynamics is also understood to be considering offering a combined gun and missile system. This would be based on the Vulcan Guiding-type gun and the Stinger missile.

In the air-to-air missile sector, British Aerospace has started negotiations with Sweden on the possibility of co-operation on the development of a new air-to-air missile, the Sky Flash 90.

The company has launched Sky Flash 90 to meet the needs of export markets that do not want to buy the proposed AMRAAM advanced medium range air-to-air missile. Amraam is under development by Hughes Aircraft of the US with possible production in the UK and West Germany.

BAE, Marconi Defence Systems and the West German Messerschmitt-Bölkow-Blohm and AEG-Telefunken companies have concluded that production of the Amraam would be feasible in Europe, but no final decisions have been made.

Other international collaborative projects currently underway include the advanced short-range air-to-air missile, the AIM-132 Asraam. This missile is being developed by British Aerospace and Bodenseewerk Gerate-technik of West Germany. This collaboration involves the two European countries developing Asraam, while the US develops the advanced medium-range air-to-air missile, Amraam.



BY LYNTON MCLEIN

Javelin Gets straight to the point.

Like the keen-pointed weapon after which it is named, the Javelin man-portable missile is designed to do one thing—stop the enemy cold before he gets within striking distance. And this it does superbly!

Now in service with the British Army and Royal Marines this latest Shorts Missile has been developed from the highly successful Blowpipe to provide a semi-automatic command to line-of-sight guidance system, capable of destroying a high-speed, ground attack aircraft or stand-off helicopter at ranges in excess of 4km. It is equally

effective against crossing or receding targets. It's man-portable, easy to operate, provides quick-reaction defence against low-level air strike and as a bonus, has a useful surface-to-surface capability against lightly armoured targets. Javelin is a purpose designed weapon which heralds a new era in man-portable defence.

Another purpose-built defence winner from Shorts—specialists in close range guided weaponry.

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To provide a multi-engagement capability, Shorts have introduced a lightweight, multiple launcher for both field and on-vehicle applications. Various configurations cater for a wide range of deployments, each mounting three missiles and an aiming unit and with provision for man-portability.

Another innovation to boost the soldier's fire-power, from Shorts—specialists in close-range guided weaponry.



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INTERNATIONAL APPOINTMENTS

Schaeffler quits Airbus for Dornier

BY RUPERT CORNWELL IN BONN

THE FUTURE of Airbus management structure of Airbus Industrie, the European airliner consortium, is in the balance after the premature return of Mr Johann Schaeffer, its vice president, to West Germany to become the new chief executive of Dornier, the company's second largest aerospace company.

Mr Schaeffer's appointment, to take effect from next February 1, was confirmed late last week by the supervisory board of Airbus Industrie, the West German consortium of companies which holds a controlling 65.5 per cent stake in Dornier.

The move means that Mr Schaeffer, who previously was senior executive of Messerschmitt-Bölkow-Blohm (MBB), the West German partner in Airbus, will have spent only 11 months in Toulouse with Airbus. His arrival there in March 1982 was a landmark which signified a major reduction in what hitherto had been overwhelming French domination of the management of the four-nation venture.

It is now likely that all four partners—France, West Germany, Britain, West Germany and Spain—will be fielding candi-

The move means that Mr Schaeffler, formerly with the Jean Monnet firm, at Messerschmitt-Bölkow-Blohm (MBB), the West German partner in Airbus, will have spent only 11 months in Toulouse with Airbus. His arrival there in March 1980 was a landmark which signalled a major reduction in what hitherto had been overwhelming French domination of the management of the four-nation venture. It is now likely that all four participating countries—France, Britain, West Germany and Spain—will be fielding candi-

dates for the job, ranking second only to Mr Jean Monnet, the Airbus chairman, when choice is made early in the New Year.

When Mr Schaeffler, widely considered to be the most forceful figure in the West European aerospace industry, chose to go to Dornier is not fully clear. Some sources believe that family considerations were the key factor in his decision.

At Dornier he will be replacing Mr Manfred Fischer, a former chief executive of the Bertelsmann publishing

concern. Mr Fischer went to Dornier in September 1984, but thereafter was caught up in the fierce feud within the owning family for control of Dornier, which had 1984 annual sales of DM 1.5bn (\$600m).

At one point he was ousted, only to be reinstated by a court verdict shortly before Daimler-Benz took over. The new owners of Dornier are known to have been unhappy at Mr Fischer's lack of experience in the aerospace sector, and pressed — ultimately successfully — to secure the services of Mr Schaeffler.

Renault strengthens its grip over AMC

BY TERRY DODSWORTH IN NEW YORK

RENAULT, the nationalised French motor group, is reshuffling the top management at American Motors (AMC), its US affiliate, in a move which will give the French parent company's grip over the running of the company.

The reorganisation, which had been expected for some time, brings in Mr. Pierre Bachevalier, an executive vice-president at Renault in France, as chairman of AMC. He replaces Mr. Paul Tippet, an American who had been chairman since 1983. Tippet stepped down from active executive involvement in the company earlier this year.

Mr. Serengeti, 58, has had previous experience at American Motors as a member of its board of directors from 1980 to

1962, when he was working in Renault's international division and as vice president for planning and control at the French group's automobile operations. He resigned the directorship at Renault when he became director of Renault's Vehicles Industriels, the group's truck subsidiary.

Mr. Jose Dedeurwaerder, 52, who was given effective control of the group about a year ago, when he became chief executive as well as president, takes on the additional title of chairman of the executive committee. Although it had been suggested that Mr. Dedeurwaerder might return to France for a senior posting, his new appointment seems to suggest that he will continue to supervise the group's issues at AMC, which he recently said he did not want to leave.

Mr. Joseph Cappy, an American who joined AMC from Ford, became chief operating officer with responsibility for day-to-day manufacturing. Aged 51, he is

currently executive vice president of the group.

The reorganisation at AMC, in which Renault has a 46 per cent holding, comes at a time of considerable uncertainty over its future in the US, where it has lost the first nine months of this year.

The company has been exposed to fierce competition in its market for its compact Alliance car, sales of which have slumped badly, and is looking to expand its product line-up. But it is clear that AMC will build a replacement model, and Mr Dederinger has indicated that he is trying to attract some state assistance to help with the cost of development, as a condition for further investment in the facilities.

UK APPOINTMENTS

Changes at Albright and Wilson

ALBRIGHT & WILSON has appointed Mr W. D. Adair to the main board as development director from January 1. He is managing director of A. & W.'s phosphates division. Mr G. L. Black has been appointed managing director, phosphates division from January 1. He is commercial director of the division. Mr D. Winstanley is division sales director, will become commercial director and deputy managing director of the division. Mr G. Frank, development director, will succeed Mr Winstanley as sales director. Mr P. H. Hoxley will succeed Mr Frank as development director. Mr J. G. Huxford will be manager of A. & W. (Australia).

on behalf of the major European suppliers of aluminium canstock to encourage can recycling schemes and the redevelopment of the market for aluminium cans in the UK, over half of all drink cans are now in aluminium.

★

Mr Roger Eckersley has been appointed a director of CRAWLEY WARREN AND CO, Lloyd's brokers, and also joint managing director of Crawley Warren Group's accident and health division.

★

Mr Iain Hardcastle has been appointed managing director of LIVERPOOL & LONDON P & I

partner in Hill Dickinson & Co. London, has retired from the board of Liverpool & London.

★

Mr E. Butler, investment manager and a director, has been appointed deputy general manager of **WESLEYAN ASSURANCE SOCIETY.**

★

VALIN POLLEN has appointed Mr Andrew Foster and Mr David Roberts to the board from January. Mr Porter joined Valin Pollen in 1954, and has a public relations background and was made an associate director in January 1956. Mr Roberts, previously a board director at London Farm joined

member of the board of Lloyds of London Press, and a director of the London Broadcasting Company.

★

Mr David C. Blundell has been appointed managing director of SOGEMIN (HOLDINGS) and chairman of its subsidiary companies. This follows the retirement of Mr Frank Gregory, who will remain on the boards as a non-executive director. Mr Patrick Freon has been appointed to the board. Sogemin (Holdings) is a subsidiary of Societe Generale des Minerais, Belgium.

★

Mr Christopher Keen has been

BRITISH ALCAN SHEET has appointed a senior manager to spearhead a campaign to recycle aluminium from used drink cans. Mr Derek Hayter has been appointed UK recycling and can promotion manager. He will act

MANAGEMENT; for an initial period he will work jointly with Mr David Gregson. Mr Hardcastle was previously managing director of a managing agency at Lloyd's, and underwriter of aviation and non-marine syndicates. Mr David Taylor, who is

Valin Pollen earlier this year as an account group head.

★

Mr Brian Nicholson has joined the board of CCA GALLERIES. He is chairman of Marlar International, a director of News UK.

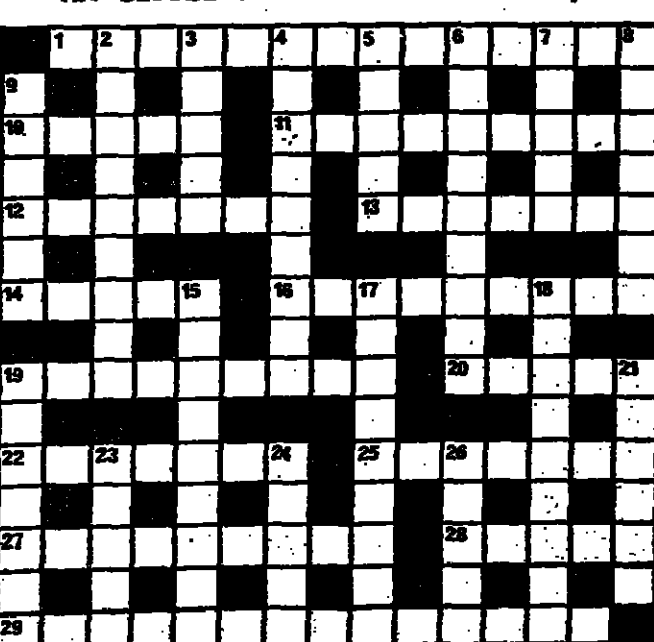
appointed general manager of THE UNITED BANK OF KUWAIT from March 31. He is at present deputy general manager. He succeeds Mr David West, who has been appointed adviser to the chairman.

FINANCIAL DIARY FOR THE WEEK

The following is a record of the principal business and engagements during the week. The board meetings are not the purpose of considering dividends and official indicators are not always available whether dividends concerned are in final. The sub-divisions shown below are based mainly on year's timetable.

[illegible]

PUZZLE No. 5900

F.T. CROSSWORD PUZZLE No. 5,900

ACROSS

- 1 Book popular music for the season (9, 5)
- 2 Took it easy (I had been in front) (5)
- 3 It contains dry material that could be set alight (8)
- 4 Children's last rant-excited cry for help (3, 4)
- 5 Referring to warming or tempers? (7)
- 6 Tours abroad move with energy (5)
- 6 A match by men losing heart concerning king (9)
- 7 I pass exceptionally round here for sort of "take-away" (9)
- 8 Drops down round the East—they came from there! (6)
- 9 A particular regard (7)
- 10 Dish—sort to put out round one (7)
- 11 I'm in "Peter"—to me, a snake about (8)
- 12 Relating to bone, part of tail, I accept (5)
- 13 When king was observer after fall (5, 2, 7)

DOWN

- 2 Source of decoration to be handed out (9)
- 3 Rain-god is out (no go) (5)
- 4 Breaking salt after disturbing trout provides lessons (9)
- 5 Sain? Connected with I about 20 (3)
- 6 You won't be this with 18 down 21 (8)
- 7 The flier could be a bit of a card (5)
- 8 Surprisingly, a scowl on missing English dictionary (7)
- 9 Present season? (5)
- 10 Paraded and dismissed (6, 3)
- 11 Sailor—sort mainly inclined to receive soaking (9)
- 12 When 23 appears on the 24th? (8)
- 13 19 and 21 A drapple? (1, 4, 2, 6)
- 14 He's seen in pleasant attitude (in 12?) (5)
- 15 One who swipes (5)
- 16 Contender holds last bit of autumnal prize (5)
- 17 The station to last Saturday's prize puzzle will be published with names of winners next Saturday.

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OPTION

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BUSINESSMAN'S DIARY

UK TRADE FAIRS AND EXHIBITIONS

January 1-12 London International Boat Show (0832 54611) Earl's Court
January 9-12 Holiday and Travel Fair (021-780 4171) NEC, Birmingham
January 11-16 Harrogate International Toy Fair (01223 6653) Harrogate
January 12-16 International Light Show (05884 658) Olympia
January 13-16 Amusement Trades Exhibition (01228 4107) Olympia
January 14-17 Which Computer? Show (01489 9100) Olympia
January 15-19 NEC, Birmingham
January 16-19 Ideal Home Exhibition (0202 296275) Brighton
January 18-22 Stationery Industry Exhibition—STATINDEX (01358 1200) Olympia
January 21-23 Hires Exhibition (01488 7788) Wembley Conference Centre
January 21-23 International Contract Flooring Exhibition (0930 243 66) Novotel
January 29-31 The Videotex User Show (01408 1151) Barbican Centre

OVERSEAS TRADE FAIRS

December 17-19 Summer Travel Industry Exhibition—TOUR (01437 2176) Amsterdam
January 6-9 International Hotel and Catering Industries Trade Fair—HORECAVA (01437 2176) Amsterdam
January 7-9 Computers, Communications and Business Equipment Exhibition—INFO/SOUTHWEST (01591 5051) Dallas
January 9-14 International Lighting Show (01439 3964) Paris
January 11-19 International Caravan, Motor and Tourism Exhibition—CMT (0131 9611) Stuttgart
January 14-19 International Furniture Show (01430 7251) Cologne
January 15-19 Asian Aerospace Exhibition (01891 5051) Singapore
January 22-28 International Pollution Monitoring and Control Exhibition and Conference—ENVIROTECH (01221 2043) Bombay
February 24-27 Duty Free Exhibition (01642 7688) Dubai

BUSINESS AND MANAGEMENT CONFERENCES

December 16-17 DRI Europe: Oil markets—threats and opportunities (01222 9671) Mount Royal Hotel, WI
December 19 Sweet and Maxwell Professional Conferences: Developments in criminal law and sentencing (01589 9853) Manchester Business School
January 7-8 Uniform Seminars: Fundamentals of 3D graphics (01940 7716) Forum Hotel, SW7
January 13-14 Institute of Personnel Management: The services in personnel management (01460 9100) Kensington Close Hotel, W8
January 13-14 PT Conferences: Aerospace in Asia and the Pacific Basin (01222 9671) Mount Royal Hotel, WI
January 13 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
January 14-15 Crown Eagle Communications: Successful public relations (01242 4111) Tower Hotel, E1
January 16 Oyez/IBC: Bankers' security and the new insolvency act (01236 4080) Royal Lancaster Hotel, W2
January 20 Frost and Sullivan: The impact of emerging technologies on your firm (01222 9671) Mount Royal Hotel, WI
January 22 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
January 23-24 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
January 24-25 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
January 25-26 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
January 26-27 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
January 27-28 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
January 28-29 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
January 29-30 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
January 30-31 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
February 1-2 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
February 3-4 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
February 5-6 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
February 7-8 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
February 9-10 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
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February 13-14 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
February 15-16 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
February 17-18 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
February 19-20 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
February 21-22 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
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February 29-30 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
March 1-2 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
March 3-4 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
March 5-6 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
March 7-8 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
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March 17-18 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
March 19-20 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
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March 25-26 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
March 27-28 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
March 29-30 Brunel Institute: How effective is your training function? (0895 56461) Brunel University, Uxbridge
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US\$ 100,000,000.—

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243 5278 10594 16749 20509 23374 28911 34150 37682 42444 46079 53018 53360 53499 63308 72649 72847 83137 88198 94568
244 5279 10600 16755 20514 23379 28916 34151 37683 42445 46080 53019 53361 53500 63309 72650 72848 83138 88199 94569
245 5280 10606 16760 20519 23384 28921 34156 37688 42448 46081 53020 53362 53501 63310 72651 72849 83139 88200 94570
246 5281 10612 16766 20524 23389 28926 34161 37689 42449 46082 53021 53363 53502 63311 72652 72850 83140 88201 94571
247 5282 10618 16771 20529 23394 28931 34166 37690 42450 46083 53022 53364 53503 63312 72653 72851 83141 88202 94572
248 5283 10624 16777 20534 23399 28938 34171 37691 42451 46084 53023 53365 53504 63313 72654 72852 83142 88203 94573
249 5284 10630 16782 20539 23404 28945 34176 37692 42452 46085 53024 53366 53505 63314 72655 72853 83143 88204 94574
250 5285 10636 16788 20544 23409 28952 34181 37693 42453 46086 53025 53367 53506 63315 72656 72854 83144 88205 94575
251 5286 10642 16793 20549 23414 28959 34186 37694 42454 46087 53026 53368 53507 63316 72657 72855 83145 88206 94576
252 5287 10648 16799 20554 23419 28966 34191 37695 42455 46088 53027 53369 53508 63317 72658 72856 83146 88207 94577
253 5288 10654 16804 20559 23424 28973 34196 37696 42456 46089 53028 53370 53509 63318 72659 72857 83147 88208 94578
254 5289 10660 16810 20564 23429 28980 34201 37697 42457 46090 53029 53371 53510 63319 72660 72858 83148 88209 94579
255 5290 10666 16815 20569 23434 28987 34206 37698 42458 46091 53030 53372 53511 63320 72661 72859 83149 88210 94580
256 5291 10672 16821 20574 23439 28994 34211 37699 42459 46092 53031 53373 53512 63321 72662 72860 83150 88211 94581
257 5292 10678 16826 20579 23444 29001 34216 37700 42460 46093 53032 53374 53513 63322 72663 72861 83151 88212 94582
258 5293 10684 16832 20584 23449 29008 34221 37701 42461 46094 53033 53375 53514 63323 72664 72862 83152 88213 94583
259 5294 10690 16837 20589 23454 29015 34226 37702 42462 46095 53034 53376 53515 63324 72665 72863 83153 88214 94584
260 5295 10696 16843 20594 23459 29022 34231 37703 42463 46096 53035 53377 53516 63325 72666 72864 83154 88215 94585
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262 5297 10708 16854 20604 23469 29036 34241 37705 42465 46098 53037 53379 53518 63327 72668 72866 83156 88217 94587
263 5298 10714 16859 20609 23474 29043 34246 37706 42466 46099 53038 53380 53519 63328 72669 72867 83157 88218 94588
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265 5300 10726 16870 20619 23484 29057 34256 37708 42468 46101 53040 53382 53521 63330 72671 72869 83159 88220 94590
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267 5302 10738 16881 20629 23494 29071 34266 37710 42470 46103 53042 53384 53523 63332 72673 72871 83161 88222 94592
268 5303 10744 16887 20634 23499 29078 34271 37711 42471 46104 53043 53385 53524 63333 72674 72872 83162 88223 94593
269 5304 10750 16892 20639 23504 29085 34276 37712 42472 46105 53044 53386 53525 63334 72675 72873 83163 88224 94594
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271 5306 10762 16903 20649 23514 29099 34286 37714 42474 46107 53046 53388 53527 63336 72677 72875 83165 88226 94596
272 5307 10768 16909 20654 23519 29106 34291 37715 42475 46108 53047 53389 53528 63337 72678 72876 83166 88227 94597
273 5308 10774 16914 20659 23524 29113 34296 37716 42476 46109 53048 53390 53529 63338 72679 72877 83167 88228 94598
274 5309 10780 16920 20664 23529 29120 34301 37717 42477 46110 53049 53391 53530 63339 72680 72878 83168 88229 94599
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276 5311 10792 16931 20674 23539 29134 34311 37719 42479 46112 53051 53393 53532 63341 72682 72880 83170 88231 94601
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278 5313 10804 16942 20684 23549 29148 34321 37721 42481 46114 53053 53395 53534 63343 72684 72882 83172 88233 94603
279 5314 10810 16947 20689 23554 29155 34326 37722 42482 46115 53054 53396 53535 63344 72685 72883 83173 88234 94604
280 5315 10816 16953 20694 23559 29162 34331 37723 42483 46116 53055 53397 53536 63345 72686 72884 83174 88235 94605
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318 5353 11044 17162 20884 23749 29428 34521 37761 42521 46154 53093 53435 53574 63383 72724 72922 83212 88273 94643
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320 5355 11056 17173 20894 23

NEW YORK STOCK EXCHANGE COMPOSITE CLOSING PRICES

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AMEX COMPOSITE CLOSING PRICES Closing prices,
December 13

S Closing prices,
December 13

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CURRENCIES, MONEY and CAPITAL MARKETS

FOREIGN EXCHANGES

Sterling slides on oil

BY COLIN MILLHAM

Sterling and the dollar finished on a calm note last week after a period of nervousness, when the pound was at a six month low, and the dollar gained enough strength to prompt intervention by central banks.

Ministers from the Organisation of Petroleum Exporting Countries played down the importance of their communique after the Geneva meeting, but the initial reaction to the statement was to sharply depress spot oil prices and push down the value of the pound. A steady increase in oil production by Saudi Arabia has left Opec quota levels about 2m barrels above the daily ceiling of 16m barrels, and the conference appeared to be defending this level, and intimating that prices would be allowed to fall as a result.

This was seen as a move to put pressure on non-Opec producers, and particularly Britain, where Government revenue from North Sea production has a large impact on the economy, and will decide the size of next year's public sector borrowing requirement and the scale of any tax cuts the Chancellor is able to provide in the 1986 Budget.

Financial markets began to think in terms of \$20 a barrel for oil, and in early trading on

£ IN NEW YORK

	Dec. 13	Prev. close
Spot	\$1.4384-1.4390	\$1.4445-1.4355
1 month	0.49-0.49pm	0.43-0.43pm
3 months	1.35-1.35pm	1.28-1.28pm
12 months	1.35-1.35pm	1.45-1.45pm

Forward premiums and discounts apply to the U.S. dollar.

Wednesday North Sea crude for January loading was quoted at \$21.80, compared with over \$30 only a few weeks ago. It was estimated that to compensate for the fall to \$20, the pound would have to decline to \$1.10, in order to maintain the amount of money flowing into the Treasury.

Three factors helped the pound recover. The first was intervention by central banks, led by the German Bundesbank. This was not specifically a move to supply support for sterling, but was largely the result of the pound's weakness. Speculative money, looking for the best return had been tempted away from the U.S. where economic growth appeared to be waning and interest rates falling, into a major financial centre offering high returns and flexible markets. This was London, but the oil price fears led to a flight back into the dollar. The US currency rose sharply, but just

before it touched DM 2.56 the Bundesbank stepped in. Thereafter the market remained nervous that the central banks would strike again, but the intervention was missed a large scale, and was probably meant as a reminder that the Group of Five agreement to push down the value of the dollar, made on September 22, was still official policy.

There appeared to be no desire by the central banks to set new lower levels for the dollar, but any move by the market to push the US currency into a higher trading range was obviously unwelcome.

The second factor was the UK Government's commitment to high interest rates and a strong pound.

Thirdly the Opec ministers appeared worried they may have overplayed their hand, and were at pains to deny any suggestion of an oil price war.

Starting finished the week around the middle of its range, and some 3 cents above the low touched on Wednesday. It was however still much lower against the D-mark led EMS block of currencies, and against the Japanese yen.

CURRENCY MOVEMENTS

Dec. 13	Bank of England	Morgan Guaranty
	Change %	Change %
Sterling	78.7	-18.1
U.S. dollar	127.1	+15.3
Canadian dollar	81.9	+10.9
Australian dollar	129.9	+5.9
Belgian franc	82.3	-9.0
Dutch guilder	53.8	-2.3
French franc	161.0	+12.5
Italian lire	50.1	+6.6
Japanese yen	44.1	-15.8
West German mark	177.5	+58.4

Morgan Guaranty changes: average 1980-1982-100. Bank of England index (base average 1975-100).

POUND SPOT—FORWARD AGAINST POUND

Dec. 13	Day's spread	Close	One month	% Three months	% Six months	% One year
US	1.4345-1.4405	1.4365-1.4375	0.43-0.40 pm	3.47	1.25-1.20pm	3.41
Canada	1.9367-2.0005	1.9367-2.0005	0.01 pm-par	0.03	0.02-0.01pm	0.03
Netherlands	4.06-4.09	4.07-4.05	0.08 pm-par	0.08	0.05-0.04pm	0.05
Denmark	72.75-74.19	73.00-72.90	20-15c pm	2.84	2.56-2.67pm	2.84
Belgium	13.13-13.17	13.13-13.14	25-30c pm	2.23	8-10c	2.28
Ireland	1.722-1.728	1.721-1.721	0.10-0.09 pm	1.28	0.07-0.03pm	0.88
W. Ger.	3.51-3.52	3.51-3.52	25-20c	7.04	6-5c pm	6.58
Portugal	225-228	225-221	145-140c	-16.23	445-1250c	-14.71
Spain	225-228	225-225	45-45c	-2.47	25-20c	0.57
Italy	2467-2480	2475-2477	15-21c	-0.72	30-35c	-0.49
Norway	11.02-11.07	11.02-11.03	5-10c	-1.02	21-30c	-0.06
France	11.05-11.05	11.05-11.05	5-10c	-0.61	1-3c	-0.37
Sweden	11.05-11.05	11.05-11.05	5-10c	-1.15	1-2c	-0.73
Japan	250-251	250-250	10-10c	0.26	0-0c	0.26
Austria	25.25-25.51	25.25-25.48	10-10c	4.56	32-27c	4.73
Switzerland	3.02-3.03	3.02-3.02	2-1c	7.43	5-5c	7.18

Belgian rate for convertible francs. Financial franc 74.30-74.40.

10-month forward dollar 2.47-2.43c pm. Financial franc 4.36-4.25c pm.

† Correction (Dec. 12). D Mark spread 3.58-3.62c, close 3.61-3.62c.

FORWARD RATES AGAINST STERLING

	Spot	1-month	3-month	6-month	12-month
Dollar	1.4339	1.4329	1.4329	1.4329	1.4329
D-Mark	3.6225	3.6225	3.6225	3.6225	3.6225
French Franc	11.10	11.0953	11.0728	11.0774	11.1133
Swiss Franc	2.0275	2.0275	2.0275	2.0275	2.0275
Japanese Yen	291.00	290.25	288.35	285.15	279.85

EMS EUROPEAN CURRENCY UNIT RATES

	Dec. 13	Change	% change	% change	Divergence
			central rates	adjusted for divergence	limit %
Belgian franc	44.3320	44.3320	-0.06	+1.18	+1.5425
Dutch guilder	1.28257	1.28257	-2.16	-0.52	+1.6421
German D-mark	2.23646	2.23646	-0.79	-0.03	+1.4658
French franc	6.54902	6.54902	-2.20	-0.96	+1.3654
Dutch guilder	3.52228	3.52228	-2.08	-0.84	+1.5162
Irish punt	0.72478	0.72478	-1.53	-0.84	+1.5162
Italian lira	1620.80	1620.80	-1.53	-1.21	+4.0855

Changes are for Ecu, therefore positive change denotes a weak currency. Adjustment calculated by Financial Times.

MONEY MARKETS

Short-term interest rates in London finished the week little changed, although periods of six months and longer were slightly higher. The flattening of the reversed yield curve reflected the general market sentiment, with the prospect of any cut in clearing banks base rates moving even further into the future.

Mrs Margaret Thatcher, the Prime Minister, made it clear last week that the struggle against inflation is the overriding priority of the Government, and so be it if this means a long period of high London interest rates.

The Prime Minister's comments were made at a time when the weakness of sterling was putting upward pressure on money market rates. It was partly the obvious determination

UK clearing banks base lending rate 11½ per cent since July 30

of the Government to maintain a strong pound, as one of the main planks of its anti-inflation plans, that helped sterling recover and allowed market rates to ease back.

When the pound threatened to fall through \$1.40 at one time on Wednesday — just before intervention by the Bundesbank to suppress a rise by the dollar — three-month interbank in London was offered at 11½ per cent. There was no indication the market believed a rise in base rates was imminent, but more a feeling that a cut to rates was

WEEKLY CHANGE IN WORLD INTEREST RATES

	Dec. 13	change	NEW YORK	Dec. 13	change
LONDON					
Base rates	11½	Unch'd	Prime rates	8½	Unch'd
3 mth interbank	11½	Unch'd	Federal funds	7½	-0.51
Treasury Bill Tender	11.1585	+0.0488	6 mth Treasury Bill	7.30	-0.41
Bank 1 Bill	11½	Unch'd	3 mth. O.D.	7.70	-0.58
Bank 2 Bill	11½	Unch'd			
Bank 3 Bill	11½	Unch'd			
Bank 4 Bill	11½	Unch'd			
3 mth. Treasury Bill	11½	Unch'd	FRANKFURT	5.5	Unch'd
1 mth. Bank Bill	11½	Unch'd	3 mth. Lombard	4.85	+0.25
3 mth. Bank Bill	11½	Unch'd	3 mth. Interbank	4.80	Unch'd
TOKYO	8.34775	+0.0125	PARIS	8½	Unch'd
One month Bill	7.66125	-0.0458	3 mth. Interbank	8½	Unch'd
BRUSSELS			1 mth. Interbank	8½	Unch'd
One month	8½	Unch'd			
Three month	8½	Unch'd			
AMSTERDAM			DUBLIN	10½	Unch'd
One month	8½	Unch'd	One month	10½	Unch'd
Three month	8½	Unch'd	Three month	10½	Unch'd

London—band 1 bills mature in up to 14 days, band 2 bills 15 to 33 days, band 3 bills 34 to 63 days and band 4 bills 64 to 93 days. Rates quoted represent Bank of England buying or selling rates with the money market. In other centres rates are generally deposit rates in the domestic money market and their respective changes during the week.

MONEY RATES

Dec. 13	Over-night	One Month	Two Months	Three Months	Six Months	Lombard
Frankfurt	4.25-4.35	4.40-4.50	4.75-4.80	4.75-4.80	4.75-4.80	5.5
Paris	9	8½-9	8½-9	8½-9	8½-9	8½
Zurich	5-5½	5-5½	5-5½	5-5½	5-5½	5
Amsterdam	5-5½	5-5½	5-5½	5-5½	5-5½	5
Tokyo	8.46875	8.46875	8.46875	8.46875	8.46875	8.46875
Milan	14½	15½	15½	15½	15½	15½
Brussels	8½-9	8½-9	8½-9	8½-9	8½-9	8½-9
Dublin	10½-11½	10½-11½	10½-11½	10½-11½	10½-11½	10½-11½

FINANCIAL FUTURES

Dec. 13	Close	High	Low	Prev
Spot	1.4370	1.4325	1.4248	1.4125
1 month	1.4370	1.4325	1.4248	1.4125
3 months	1.4370	1.4325	1.4248	1.4125
12 months	1.4370	1.4325	1.4248	1.4125

IMM—STERLING \$s per £

Dec. 13	Close	High	Low	Prev
Dec	1.4355	1.4445	1.4355	1.4325
March	1.4355	1.4445	1.4355	1.4325
June	1.4100	1.4180	1.4090	1.4070
Sept	1.4000	—	—	1.3075
Dec	1.3500	—	—	1.2900

LIFFE—STERLING £25,000 \$s per £

Dec. 13	Close	High	Low	Prev
Dec	1.4055	1.4230	1.4290	1.4247
March	1.4125	1.4180	1.4125	1.4127
June	1.4025	1.4025	1.4025	1.4022
Sept	1.4025	1.4025	1.4025	1.4022
Dec	1.4370	1.4465	1.4364	1.4376

Est. Volume 524 (165)

Previous day's open int. 3,657 (3,652)

LIFFE—DEUTSCHE MARKS

Dec. 13	Close	High	Low	Prev
Dec	0.2555	0.2605	0.2555	0.2555
March	0.2555	0.2605	0.2555	0.2555
June	0.2555	0.2605	0.2555	0.2555
Sept	0.2555	0.2605	0.2555	0.2555
Dec	0.2555	0.2605	0.2555	0.2555

Est. Volume 28 (60)

Previous day's open int. 216 (209)

CHICAGO

Dec. 13	Close	High	Low	Prev
Dec	84.13	84.19	84.08	83.28
March	84.08	84.19	84.08	83.28
June	84.08	84.19	84.08	83.28
Sept	84.08	84.19	84.08	83.28
Dec	84.08	84.19	84.08	83.28

US TREASURY BONDS (CBT)

Dec. 13	Close	High	Low	Prev
Dec	84.13	84.19	84.08	83.28
March	84.08	84.19	84.08	83.28
June	84.08	84.19	84.08	83.28
Sept	84.08	84.19	84.08	83.28
Dec	84.08	84.19	84.08	83.28

Est. Volume 28 (60)

Previous day's open int. 216 (209)

US TREASURY BILLS (IMM)

Dec. 13	Close	High	Low	Prev
Dec	84.13	84.19	84.08	83.28
March	84.08	84.19	84.08	83.28
June	84.08	84.19	84.08	83.28
Sept	84.08	84.19	84.08	83.28
Dec	84.08	84.19	84.08	83.28

Est. Volume 28 (60)

Previous day's open int. 216 (209)

CENT. DEPOSIT (IMM)

Dec. 13	Close	High	Low	Prev
Dec	84.13	84.19	84.08	83.28
March	84.08	84.19	84.08	83.28
June	84.08	84.19	84.08	83.28
Sept	84.08	84.19	84.08	83.28
Dec	84.08	84.19	84.08	83.28

Est. Volume 28 (60)

Previous day's open int. 216 (209)

THREE-MONTH EURO-DOLLAR (IMM)

Dec. 13	Close	High	Low	Prev
Dec	84.13	84.19	84.08	83.28
March	84.08	84.19	84.08	83.28
June	84.08	84.19	84.08	83.28
Sept	84.08	84.19	84.08	83.28
Dec	84.08	84.19	84.08	83.28

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THREE-MONTH EURO-DOLLAR (IMM)

1238-1238	1238-1238	1238-1238
77g-8	77g-8	881g
9-91a	9-91a	9-91a
5-1 57c	57a-6	57b 6
41a-43a	41a-43g	4r2 4r6
41b-41c	41g-41j	47b-5
111a-12	111a-12	111a-12